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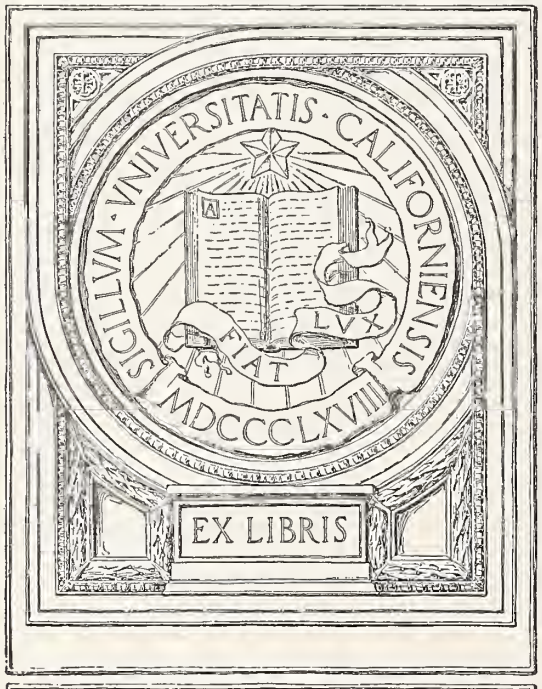

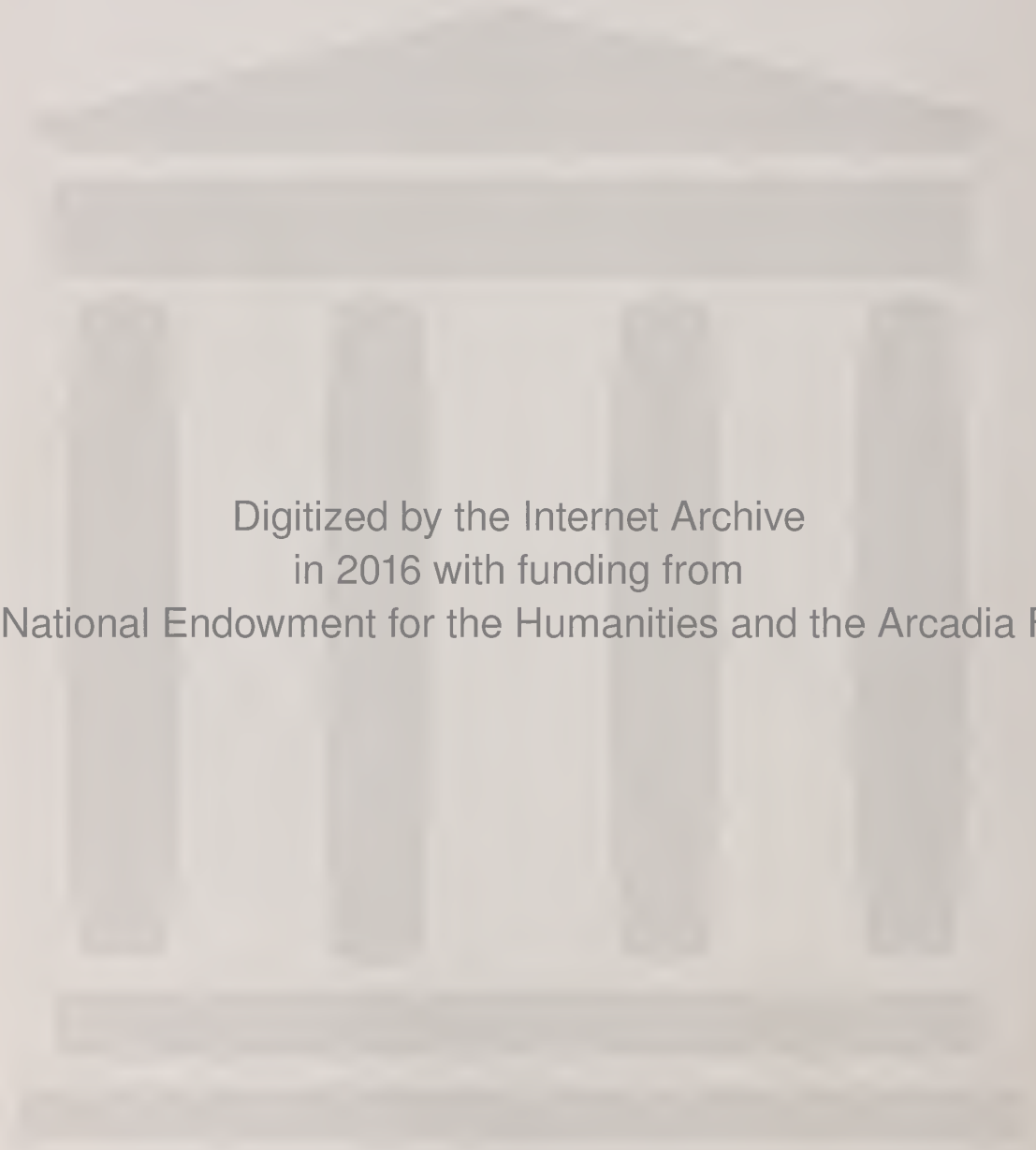

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The JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- Space Medicine
- Coronary Heart Disease and Anticoagulants
- Detection of the Coronary-Prone Adult: The Framingham Study
- Vesico-Ureteral Reflux in Children
- Pulsating Supraclavicular Tumor: A Case Report
- Toxic Effects From the Use of Agricultural Chemicals
- University of Iowa College of Medicine Clinical Pathological Conference

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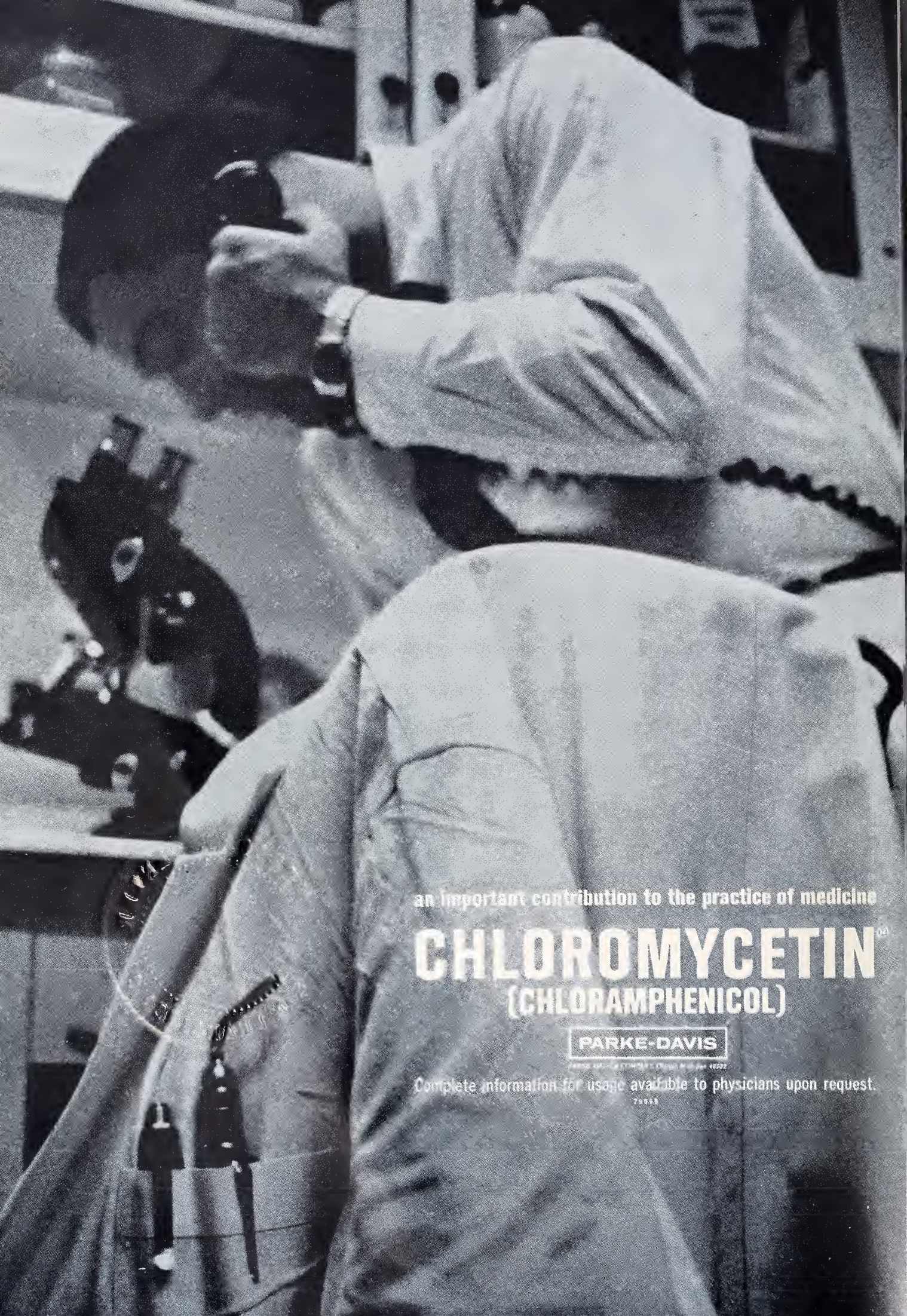
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(1) Frykman, H.M.: Minn. Med., Vol. 38, Jan. 1955. (2) Poth, E.J.: The J.A.M.A., Vol. 163, No. 15, April 13, 1957. (3) McGivney, J.: Texas State Jour. of Med., Vol. 51, No. 1, Jan. 1955. (4) Stern, F. H.: Jour. of The Amer. Ger. Soc., Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: N.Y. State Jour. of Med., Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.L.: Jour. of Oral Surg., Anes. & Hosp. Dental Serv., Vol. 19, July 1961. (7) Weekes, D. J.: E.E.N.T. Digest, Vol. 25, No. 12, Dec. 1963.

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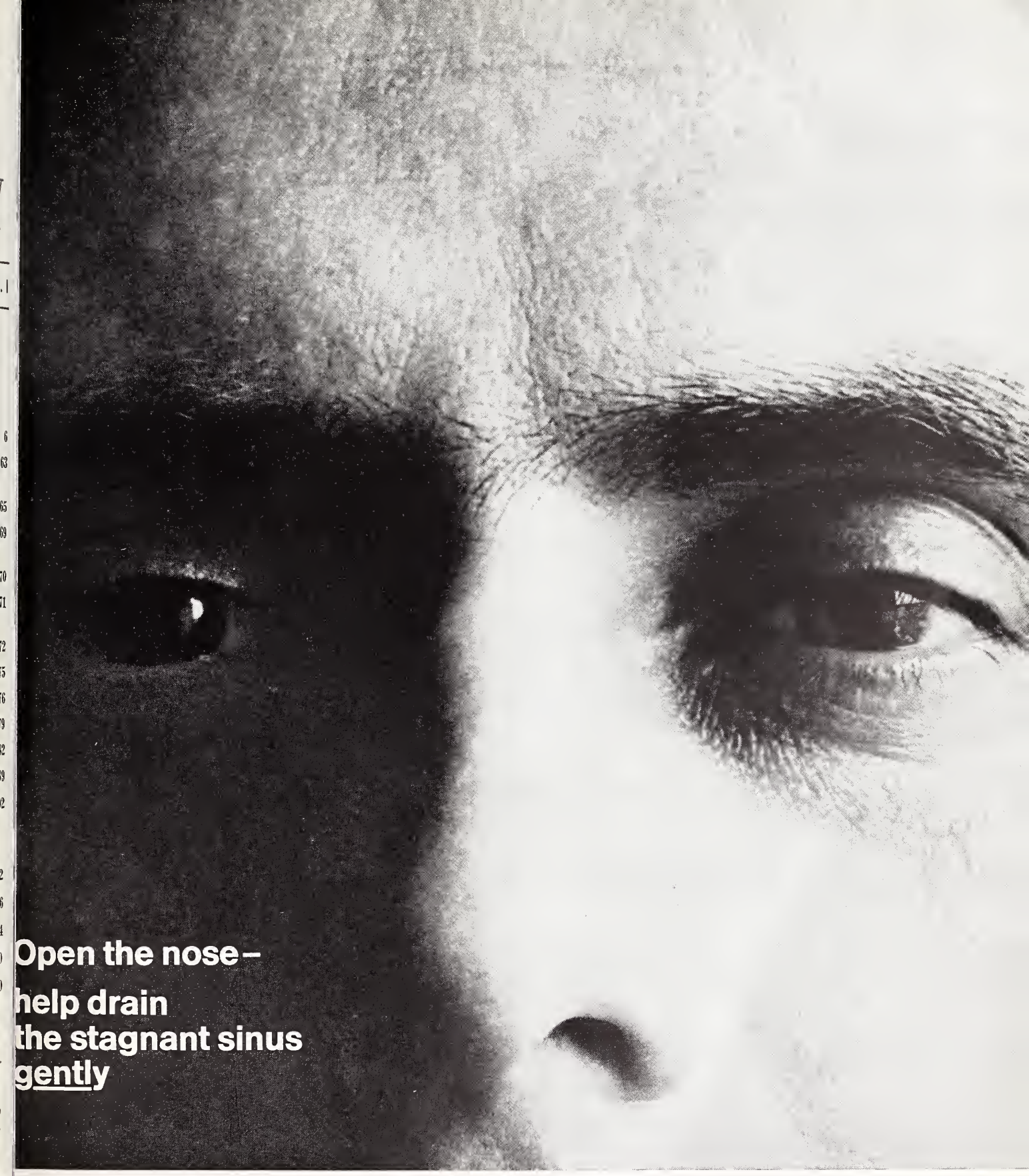

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*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

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The Month in Washington

Washington, D. C.—The Public Health Service has expanded its "pap" test program, with a goal of providing cervical cancer tests for most women who enter hospitals and for many of those who see physicians for any reason. A total of $6 million has been allotted for the expanded nationwide campaign. Grants will be made to hospitals, medical schools, state and local health departments and non-government health groups for training of technicians, post-residency training of physicians, purchase of laboratory equipment, examination of hospital outpatients and other such expenditures.

Since last March, the American Academy of General Practice has been implementing an office cancer-detection program for the PHS. A PHS spokesman termed the program "most effective," although not costly.

The PHS said it expects to achieve its goal in hospital tests within the next five years, with the number of hospitals providing this service to all adult women patients increasing each year during this period.

Hospitals providing care for the poor and medically indigent will receive first consideration in the awarding of grants. Usually these patients have not been tested for cervical cancer, the PHS said. PHS Surgeon General William H. Stewart said the new hospital-based screening program reaching high-risk, low-socio-economic groups offers "a truly effective" means of fighting cancer through the "pap" test.

Although the "pap" test was developed more than 20 years ago, only 20 per cent of the nation's 62 million adult women had received the test last year, the PHS said.

The report of the President's Commission on Heart Disease, Cancer, and Stroke proposed a national cervical-cancer detection program as the next logical step in expanding the limited program previously carried out by the PHS Cancer Control Program. The clinical training programs for cancer control will have an appropriation of $6 million for the next 12 months—double the amount previously available. The grant-aided programs will be carried out by medical schools, hospitals, and such health groups as the American Cancer Society, the American Academy of General Practice, and state and local health departments.

* * *

After President Johnson named the National Advisory Council on Regional Medical Programs to advise the government on programs authorized by the Heart Disease, Cancer and Stroke Law, Dr. James Z. Appel, AMA president, expressed regret that "the AMA was not asked to submit any nominations to this important body."

"Frankly, we are disturbed that the PHS has taken this action, in view of our known interest in this Act and the inclusion before its enactment of the 20 amendments we had proposed," Appel said. "You may remember that one of the amendments incorporated into the final bill was our suggestion that the Advisory Council have final authority in approving or disapproving grant requests, rather than only advisory authority as initially provided."

"Nonetheless," Appel told the AMA House of Delegates in Philadelphia, "If we provide effective leadership, and if the PHS cooperates, it may be that this law will permit the development of programs which will benefit the public and be acceptable to the profession. I cannot urge you strongly enough, therefore, to take steps now through appropriate state and local society committees to meet with medical school deans, state health department directors, teaching-hospital administrators and department heads in an effort to establish jointly a series of programs under the Act that would be wholly beneficial."

Named to the Advisory Council were: Dr. Michael E. DeBakey, Houston, who headed the commission that recommended the program; Dr. John Willis Hurst, Atlanta, the President's heart specialist; Dr. George E. Moore, Buffalo, N. Y.; Dr. Clark M. Millikan, Mayo Clinic, Rochester, Minn.; Dr. Cornelius M. Traeger, New York, N. Y.; Dr. Leonidas H. Better, Chicago; Mary I. Bunting, president of Radcliffe College; Gordon Cumming, Sacramento, Calif.; Dr. Bruce Everist, Ruston, La.; Dr. William Peeples, Maryland health commissioner; Dr. Robert J. Slater, Burlington, Vt.; and Dr. James T. Howell, Detroit. Surgeon General Stewart will be chairman.

* * *

Clinical testing of the experimental drug DMSO has been discontinued by voluntary agreement between the drug sponsors and the Food and Drug Administration. The action was prompted by reports of adverse effects on the eyes of laboratory animals. About 1,000 investigators had been testing the drug on thousands of human patients. Both the American Medical Association and the FDA

(Continued on page 11)

Announcing EUTRON™

pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of moderate to severe hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.

Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

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New **EUTRON** extends your range of treatment in moderate to severe hypertension

A single product you can use even in the presence of congestive heart failure or edema

Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.

BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.

The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week – maximum reduction in seven to ten days.

Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

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Prescribing information for EUTRON

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

previously had warned that attempted self-medication with the material was dangerous.

DMSO is produced as an industrial solvent as well as in grades for medical-research purposes.

* * *

A special advisory committee of non-government medical experts is conducting a comprehensive review of the side-effects of birth-control pills. The Advisory Committee on Obstetrics and Gynecology was appointed in November by the Food and Drug Administration because of reports that women who had taken oral contraceptive pills had suffered thromboembolic phenomena including strokes, thrombophlebitis and pulmonary embolism, and various eye and vision manifestations. An article in the AMA's ARCHIVES OF OPHTHALMOLOGY reported 69 cases of eye ailments, migraine and strokes among women who had taken the pills.

As an interim measure, the FDA directed manufacturers of the pills to put two warnings on package labels (1) that use should be stopped if eye problems occur, and (2) that women who have had strokes should not take them.

It is estimated that more than four million American women have been taking the birth control pills which are manufactured by seven U. S. drug firms.

AMA Health Information Widely Distributed

More than 31 million pieces of literature, mostly related to health information and education, had been distributed by the AMA between January 1 and the middle of November, 1965, or more than twice the amount distributed in 1964. Steadily increasing requests indicate that it plays a significant role in schools, conferences, health-improvement efforts, career days and individual information, according to Dr. F. J. L. Blasingame, the AMA executive vice-president.

Some of the more popular items: an emergency medical information card, a family health record, and the pamphlets "Until Your Physician Comes," "Smoking: Facts You Should Know" and "First Aid Manual."

Approximately 50,000 orders for a sex-education pamphlet arrived after it was mentioned by a nationally syndicated columnist.

More than 80 pamphlets and two sets of 12 full-color posters are available from the AMA. A small charge is made for some items. For a list of publications, write to the Circulation and Records Department, American Medical Association, 535 North Dearborn Street, Chicago 60610.

ANNUAL CLINICAL CONFERENCE

Chicago Medical Society

February 27, 28 - March 1, 2, 1966

Palmer House, Chicago

THIS CONFERENCE WILL BE OF INTEREST TO ALL PHYSICIANS. It will be presented in a manner designed to interest the generalist and specialist alike. THE PROGRAM IS PRESENTED BY TYPES OF DISEASE ENTITIES, NOT SECTIONALIZED BY MEDICAL SPECIALTIES. All physicians, regardless of their field of interest, will find this program to be informative and useful.

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Waterloo Forum on Health Care Resources

Mr. Don Neumann, a staff member, represented the IMS at a conference in Waterloo on October 27 on "Forum on Efficient Use of Health Care Resources," co-sponsored by the Black Hawk County Medical Society and the Employers Health Care Council of Black Hawk County. A summary of Mr. Neumann's report follows:

Between 80 and 100 persons from the Waterloo area concerned with providing and financing health care came together Wednesday, October 27, to evaluate their present facilities, resources and problems, and to examine these factors in light of the "Medicare" legislation and other considerations.

The evening session was a joint program of the Black Hawk County Medical Society and the Employers' Health Care Council of Black Hawk County. It was entitled a "Forum on Efficient Use of Health Care Resources."

The idea for the forum germinated from the belief that useful recommendations might evolve from an open discussion among individuals concerned in diverse ways with the spectrum of health care in Black Hawk County. Factors which precipitated the forum included: changes in group insurance plans and benefit plan levels; contemplated replacement of fixed-fee schedules with "usual, customary, reasonable and necessary" charges by physicians; availability of data processing to pinpoint areas of excessive cost and/or utilization; a growing desire among members of the medical profession, leaders in the health insurance field and representatives of industry to work together on problems of mutual concern; and the increasing dominance of the federal government in the area of health care.

Five panelists, each representing a separate spoke in the health-care wheel, brought their particular expertise to bear on current trends. These panelists were: C. W. Seibert, M.D., a Waterloo physician, and chairman of the Iowa Medical Society Board of Trustees; Walt Cochran, plant comptroller at the John Deere Waterloo Tractor Works and a member of the Executive Committee, Employers' Health Care Council; R. C. Niblo, of the Aetna Insurance Company, chairman of the Iowa Committee Health Insurance Council; F. P. G. Lattner, Des Moines, past-president and adviser, Iowa Blue Cross; and Roland Enos, administrator of Schoitz Memorial Hospital, Waterloo, and president of the Iowa Hospital Association.

Dr. Seibert, in his comments, indicated that medicine must not abrogate its responsibility, but rather must assume a stronger position of leadership in this period when considerable attention is being given to the expansion of health facilities. He called particular attention to the Iowa Medical Society's leadership role in this area, mentioning specifically the development of a new Voluntary Statewide Health Facilities Planning Council. He urged establishment of such a voluntary body at the local level in Black Hawk County. He said that we must utilize the resources we have in the most efficient way, for the alternative is to do nothing, and then have either federal or state officials tell us what we must do. He discussed utilization committees, which have existed to a degree in some areas, but which now are an absolute requirement if a hospital is to be a participant in "Medicare." He explained that organized medicine is insisting that private physicians serve on these committees.

Mr. Cochran reviewed the health care picture from the position of management, gave attention to the increasing demands placed by labor on job-related health care benefits, and stressed the importance of conserving the health-care dollar. In highlighting the group plans which cover John Deere and Rath, he made reference to such points as: (1) the growing desire for major-medical coverage; (2) the raising of age limits to extend coverage for dependent children; (3) the important need for a coordination-of-benefits clause in group coverage; (4) the introduction of the reasonable and customary fee approach; (5) progress in the development of a new and simplified claim form. He expressed the belief that industry, through its employee benefit programs, has been and is becoming an increasingly more important contributor to the health and welfare of the community. He implied that industry has a significant role to play in developing and maintaining health care efficiency, and in curbing spiraling costs insofar as possible.

Mr. Niblo familiarized those attending the forum with the Health Insurance Council. He said that the eight insurance companies that write 90 per cent of the health and accident coverage in the nation organized the HIC in 1946. He said HIC compiles, reports and interprets the insurance industry's feelings concerning trends in the health care field. He reported that data produced each year by the HIC on financing health care is widely used by labor, management and mass media. He cited the important role of the physician in the whole program, and emphasized the need for mutual respect, understanding and communication among doctors, hospital administrators and insurance representatives. He said the HIC is working with the AMA and the AHA, and he suggested this relationship must permeate to the state and local levels. He said the greatest recent advances have been in the area of comprehensive major-illness coverage. He concluded by emphasizing that all possible should be done to preserve the voluntary system.

(Continued on page 16)

The tell-tale lesion on the back of her neck

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Fluids and Electrolytes in Clinical Practice

RADISSON HOTEL, MINNEAPOLIS, JANUARY 15-16

All day Saturday, January 15, and on Sunday morning, January 16, the Minnesota Heart Association and E. R. Squibb & Sons, Inc. will present a symposium on the complex changes in body chemistry in disease, particularly heart disease. It has been approved for 7½ hours of postgraduate-study credit by the American Academy of General Practice.

Saturday

9:10 a.m. "Ions, Buffers, Millequivalents and Stuff Like That"—Wallace D. Armstrong, Ph.D., M.D., Head of Physiological Chemistry, University of Minnesota

9:40 a.m. "Fluid Compartments and Their Shifts"—H. Mead Cavert, M.D., Ph.D., Associate Dean, University of Minnesota Medical School

10:40 a.m. "How to Approach Electrolyte Problems in Children"—Richard B. Raile, M.D., Chief of Pediatrics, Hennepin County General Hospital, Minneapolis

11:10 a.m. "Major Diuretics—How They Work"—Edward J. Cafruny, M.D., Ph.D., Professor of Pharmacology, University of Minnesota Medical School

2:00 p.m. "Fluid and Electrolyte Balance in Congestive Heart Failure"—Ben I. Heller, M.D., Head of Clinical Laboratories, U. of Oklahoma

2:30 p.m. "Cardiovascular Reflexes and the Regulation of Fluid Balance"—Bernard Zimmerman, M.D., Ph.D., Head of Surgery, U. of West Virginia

3:00 p.m. "Fluid and Electrolyte Disturbance in Chronic Renal Failure"—William J. Johnson, M.D., Director, Mayo Artificial Kidney Unit

3:50 p.m. "Recognition of Congestive Heart Failure in Infants"—James W. DuShane, M.D., Mayo Clinic

4:20 p.m. "Fluids and the Burn Patient"—James L. LaFave, M.D., Chief, Burn Unit, Ramsey County Hospital, St. Paul

Sunday

9:10 a.m. "Electrolyte Abnormalities in Diabetes"—Dr. Heller

9:40 a.m. "Fluid Management in the Postoperative Patient"—Dr. Zimmerman

10:10 a.m. "Electrocardiographic Changes Due to Digitalis Excess"—Howard B. Burchell, M.D., Mayo Clinic

10:40 a.m. "Fluids and the Comatose Patient"—Robert Gumnit, M.D., Chief of Neurology, St. Paul-Ramsey Hospital

11:10 a.m. "Management of Congestive Heart Failure in the Child"—Dr. DuShane

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Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

Before prescribing, consult package circular.

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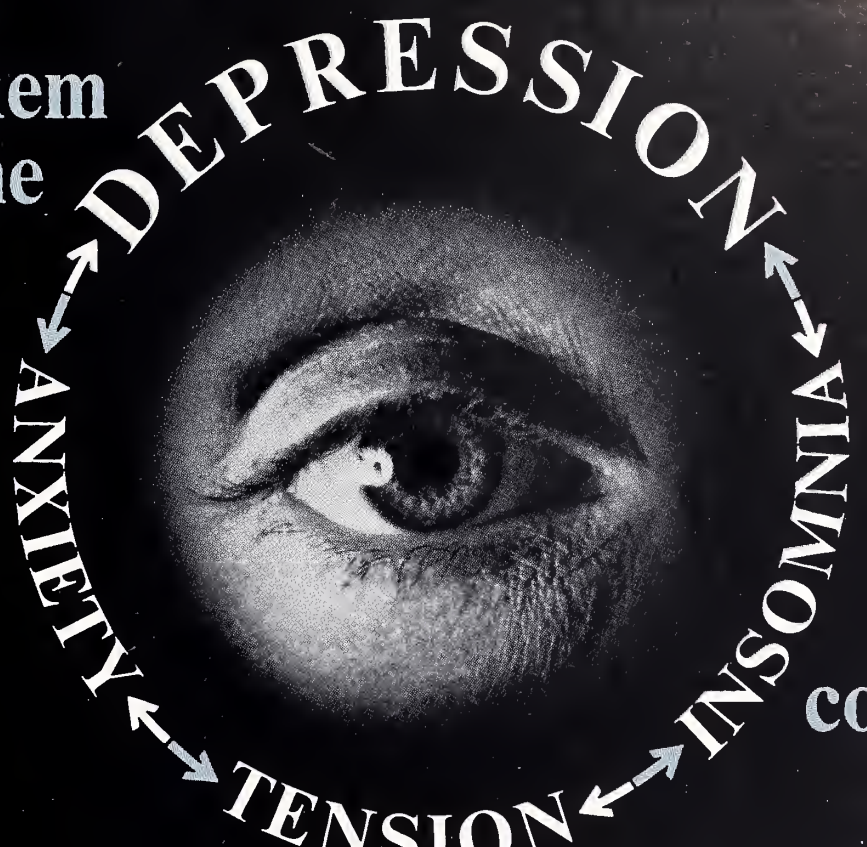
When
nsomnia
s a problem
in the



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meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

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**usually restores
normal sleep quickly
by helping
to lift depression...
calm associated anxiety,
tension, and rumination**

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(Continued from page 12)

Mr. Lattner used statistics available to him to compare Black Hawk County with the rest of the state. The cost of health care at a particular hospital is influenced, he said, by a variety of factors: (1) number of beds available; (2) services provided; (3) economic status of area it serves; (4) types of coverage available; and (5) age level of community, etc. He observed that a case-deductible has a tendency to hold down hospital utilization. However, he said, the application of a deductible does not seem to have a bearing on lengths of stay in the hospital. He noted that about 70 per cent of a hospital budget goes for salaries, and that the remainder covers materials, equipment and depreciation. In comparing Black Hawk County hospital utilization with that in the rest of the state, he said there are some pluses and some minuses; Black Hawk County admissions, which had run higher than the Blue Cross state average in 1954, evened up with the plan average in 1964; the length of stay in Black Hawk County, he pointed out, currently exceeds the plan average for the state. He called attention to the pilot study now in progress, jointly sponsored by the IMS and the IHA, which will examine the utilization characteristics of 30 Iowa hospitals and will provide extensive useful information on use patterns in the state.

Mr. Enos made what he called educated guesses as to the probable adequacy of health care facilities in Black Hawk County with the advent of "Medicare." He said increased utilization seems a certainty. He alluded to Title 19 of P.L. 89-97, which calls for uniform medical provisions for many persons under 65, and implied that it will bring more people into hospitals. The three-day hospital-stay requirement preceding transfer to an extended-care facility will also hike utilization, he predicted. He said the average length of stay for persons over 65 in Black Hawk County was 11.7 days, as contrasted to 7.2 days for people of all ages. He estimated there would be 2,700 additional admissions in Black Hawk County hospitals because of "Medicare." He listed these utilization controls: (1) deductibles; (2) review committees; and (3) increasing physician reluctance to admit persons over 65 who are less than acutely ill. He listed the following as hospital relief valves: (1) extended care facilities; (2) outpatient diagnostic facilities and (3) the visiting-nurse program. He said the real problem areas in connection with "Medicare" will be (1) the shortage of trained hospital manpower; (2) a spiraling wage scale as facilities compete for personnel; (3) relationships with physician specialists; (4) additional record-keeping; and (5) limitation on selection of drugs. He concluded by suggesting that the general hospital will become an increasingly important center of health care within the community.

Co-chairmen of the forum were: V. H. Plager, M.D., president, Black Hawk County Medical Society, and Mr. J. H. Fliehler, chairman, Employers' Health Care Council.

Theoretical Town of 1,000 People

If all the people in the world could be reduced proportionately into a theoretical town of 1,000 people, the picture would look something like this:

In this town, there would be 60 Americans, the remainder of the world would be represented by 940 persons. This is the proportion of the population of the United States to the population of the world, 60 to 940.

The 60 Americans would have half the income of the entire town, with the other 940 dividing the other half.

About 330 people in the town would be classified Christians; 670 would not. At least 80 townspeople would be practicing Communists, and 370 others would be under Communist domination. White people would total 303, with 697 non-white.

The 60 Americans would have an average life expectancy of 70 years, the other 940 less than 40 years on the average. The 60 Americans would have 15 times as many possessions per person as all the rest of the people. The Americans would produce 16 per cent of the town's food supply. Although they eat 72 per cent above the maximum food requirements, they would either eat most of what they grow, or store it for their own future use at an enormous cost.

Since most of the 940 non-Americans in the town would be hungry most of the time, it would create some ill feelings toward the 60 Americans who appeared to be enormously rich and fed to the point of sheer disbelief by the great majority of townspeople. The Americans would also have a disproportionate share of electric power, fuel, steel and general equipment.

Of the 940 non-Americans, 200 would have malaria, and three would have leprosy. Forty-five would die from malaria, cholera, typhus, and other infections. One hundred sixty-five would die from starvation and malnutrition. None of the 60 Americans will ever get these diseases or probably ever be worried about them.

The 60 Americans would each be spending at least $87 per year for liquor and tobacco but less than $20 per year for the finest medical care in the world—and would be loudly claiming that medicines and medical care cost too much.

—From Eli Lilly & Company

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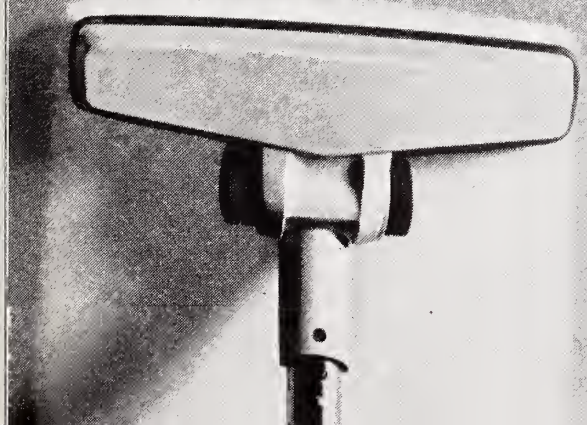
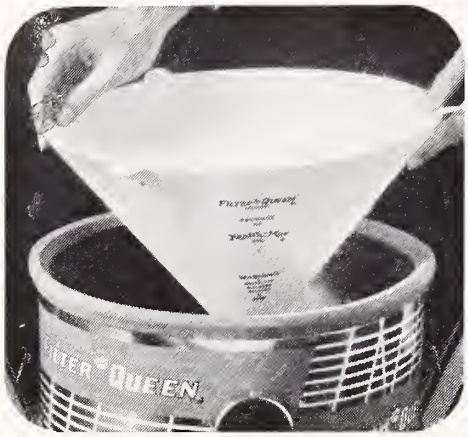


Only Filter Queen cleans the air, too!

Proof? See inside—

DRAMATIC TEST PROVES FILTER QUEEN TRAP



1 Place a fresh Sanitary Filter Cone in the FILTER QUEEN container. (It takes only a moment to open the machine and replace the old Filter Cone.)

2 Now unfold a clean white handkerchief and drop it into the Sanitary Filter Cone. (Even the daintiest, sheerest handkerchief may be used with perfect safety.) Then replace the turret top on the container.

3 Now turn the machine over to any one witnessing the demonstration, and have her start the machine and apply the nozzle to any place where there is obvious dirt and dust. Keep the machine operating for a full minute.

See the proof with the
FILTER QUEEN
"clean handkerchief" test

4 Remove the top of the container, and lift out the handkerchief. You'll find it spotless as it was when it went in! (Where did the dirt go? Look in the bottom of the container.)

DUST AS NO "VACUUM CLEANER" CAN!

Revolutionary...and in a class by itself!

FILTER QUEEN

has the scientific cleaning features that hospitals need most

All "vacuum" cleaners were much the same until the FILTER QUEEN SANITATION SYSTEM was designed. FILTER QUEEN'S patented Sanitary Filter Cone eliminates the need for messy bags, traps practically all airborne contaminants passing into the machine (Harvard Medical School Report in Journal of the American Medical Association, November 25, 1958).*

Experienced hospital housekeepers know this well. That is why FILTER QUEENS have replaced every type of vacuum cleaner in hundreds of hospitals throughout the world.

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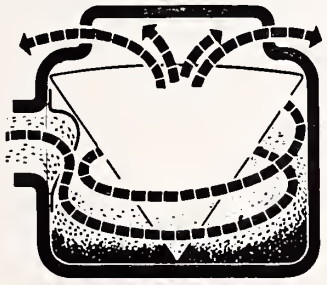

container; then is whirled by centrifugal force away from the cone. Dust and dirt are dropped to the bottom of the container. (See illustration.) Air, being lighter, is funnelled to the center of the "cyclone," filters through the Sanitary Filter Cone and returns to the room dust-free.

Why not ask your local FILTER QUEEN Distributor to make the dramatic handkerchief test (pictured at left) in your hospital? There is no better way to prove the improvement in cleaning ability between a FILTER QUEEN SANITATION SYSTEM and any type of vacuum cleaner. (You'll find your distributor listed in the Yellow Pages; or write Health-Mor, Inc. direct).

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"I heartily recommend to any hospital administrator who is presently unhappy with the type of cleaning machine in use, that he try FILTER QUEEN for only two days and the machine will sell itself."

"The FILTER QUEEN is great—a very important factor in patient areas, and is constructed so as to prevent air turbulence of dust at floor level. Filtering of the air, while in general operation, is also a very important and desirable factor."

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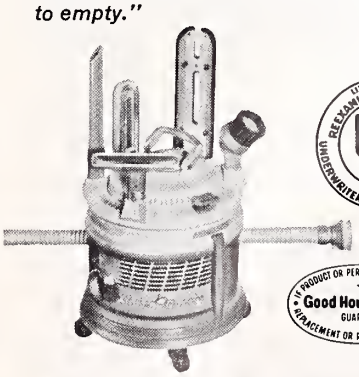
"The air exhaust at the top of the unit is a wonderful feature, and the Sanitary Filter Cone is certainly our answer for working in closely confined patient areas."

"We thought we had a clean hospital and a fairly good method of achieving acceptable sanitation, but this little machine made us revise our thinking and our methods."

"A quiet motor which possesses excellent cleaning power and the convenience of having to clean out the cleaning compartment only once a month, has proved very advantageous. One of the most important points . . . is that there is no bag to empty."



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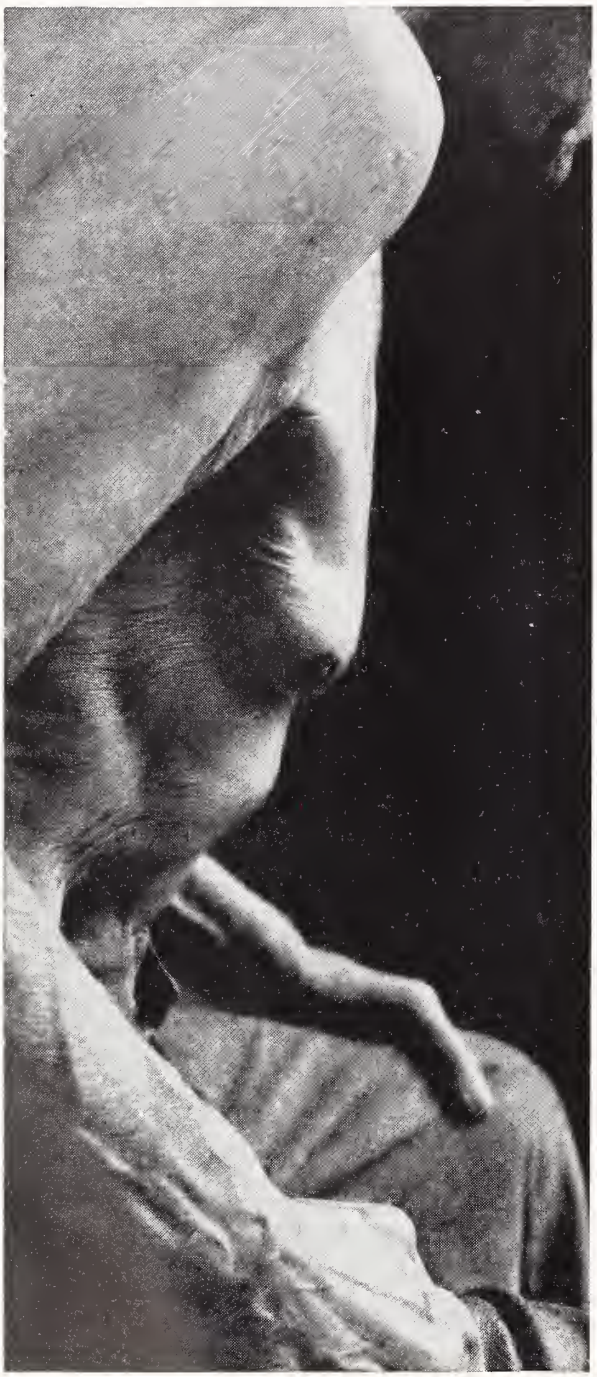

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Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

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Scientific Articles

Space Medicine

COL. PHILIP G. KEIL, USAF, MC
Washington, D. C.

THE ENGINEER, the tactician and the nuclear physicist regard space as a simple extension of the atmosphere. For machines, that is true, although many technologic advances were made to augment our knowledge of aerodynamics incident to aerial flight. True, the liquid fuel in some of the first boosters didn't know which was the bottom or the top of the tank. But this difficulty was solved by the application of fairly simple engineering principles.

The space medicine worker must deal with problems which do not lend themselves to such ready solution. Man and all other species of living things have been subjected to gravitational, magnetic and electromagnetic forces for untold hundreds of thousands of years. What happens when these forces are removed or drastically changed?

We know the answers, at least partially, through the use of technics that we can apply on the ground, or near it, to simulate the space environment, and from our own and Soviet experience in space flights.

Space begins at the end of the aerodynamically-effective atmosphere, around 120 miles from the earth's surface. With regard to certain physiologic factors, space reaches down to 12 miles from the ground. From 120 to about one million miles above us, the earth's gravisphere prevails. Beyond that—in so-called "deep space"—the sun's gravitation predominates. In an earth-moon line, earth's gravity reaches 193,000 miles, and the moon's 35,000 miles.

Col. Keil is director of bioastronautics at the headquarters of the Air Force Systems Command, Andrews Air Force Base. He made this presentation at the IMS annual meeting on April 12, 1965.

HYPOGRAVITY

Hypogravity implies that, by some means, we weigh less momentarily. We feel it when we reach the top and just after we start to descend in a rapidly revolving ferris wheel, or as we travel rapidly over a series of small hills in an automobile. The buoyancy of water permits a similar sensation, and the saltier the water—the more dense it is—the more pronounced is the effect.

Zero gravity, or weightlessness, can be simulated for 10 to 40 seconds by aircraft such as the T-33, F-89, F-102 or KC-135, in flying certain maneuvers, and the X-15 pilot is weightless for three to four minutes. But long-term weightlessness is possible only in space.

ORGAN SYSTEMS

The heart is an extremely efficient pump with an enormous reserve, but it is an intrinsically lazy organ. Weightlessness makes its work easier, it does only what it has to do and no more, and its capability decreases with disuse. The musculoskeletal system is similar, for muscles waste quickly if they aren't exercised, and bones decalcify. The central nervous system remains alert and responsive, but there is less-obvious decrement of other organ systems.

Major Duane Graveline, an Air Force physician, performed a series of well-conceived experiments to show the physiologic changes which accrue while a man remains relatively motionless in a tank of water for periods ranging from several hours to a week. He demonstrated that loss of muscle strength and cardiac reserve is prompt and profound. He plotted cardiovascular response to graded exercise, and determined cardiac output by a catheter technic. Complete recovery, subjective

and objective, took about as long as the duration of the immersion.

Several bed-rest studies have been done at the Lackland AFB Hospital, in San Antonio, at the School of Aerospace Medicine, in San Antonio, and at the Douglas Aircraft Company's Santa Monica facility. All subjects were healthy young men in good physical condition, and usually they were athletes. Heart and muscle decrement was consistently present. In corollary and later studies, various exercises were prescribed in an effort to maintain cardiac responsiveness and skeletal-muscle tone. Isotonic exercise helped to establish a new physiologic "steady state," but 7½ minutes on a centrifuge at forces up to 3-5 G four times daily was much more effective. The deleterious effects of bed rest were completely overcome by this means in only 30 minutes of each 24 hours.

Each astronaut who has spent more than a few hours in space has had a measurable and significant loss of cardiovascular tolerance to exercise. The subjective complaints that were present in some of them were manifested by faintness and giddiness. Objectively, tilt-table response did not return to normal for a week to 10 days. We must regard that fact as a manifestation of profoundly altered physiologic response.

Most of our knowledge, up to and including the flight of GT-3, on March 23, 1965, came from the Soviets. For some of our answers, we must interpret, and usually interpolate, their data. At the scientist level, the Russians have been frank and, we believe, honest in their answers, but they surely have not told us all they know. Most of their space ventures have been primarily biomedical, and secondarily something else. They have followed a well-laid plan.

How are we going to learn whether men can survive in a space ship for days and weeks and months? Let's start with the thesis that we can learn whatever may be necessary to do it.

I am convinced that artificial gravity will be necessary for prolonged space ventures, and my belief is based on my discussions with many knowledgeable people over the past several years. A third of a gravitational field—0.3 G—for eight hours daily, if we can provide it, will suffice to maintain a steady physiologic state. It may be 0.1 G for two hours, and it may be more; no one knows. These are "ball park" figures, but nonetheless they provide us a place to start. Also, we shall probably have to provide the ship with an electromagnetic field on the order of one gauss. This is something that we must seek to determine now, so that we may have the answers by 1967 or 1968.

We must look to lower species of animals for our answers. Andrew Haley, president of the International Astronautical Federation, has said, "Biological hazards arising from travel in outer space will be diagnosed and largely overcome [but] the penalty for those investigations will be the sacrificing of numerous warm-blooded animals and, in time, of numerous human beings. The sacrifice of human beings will be roughly a little higher than was incident to man's conquest of the air."

Hubertus Strughold states: "Below 600 miles altitude, manned orbital flight seems to be relatively safe. Beyond this altitude, medical considerations may influence the timetable considerably. . . . Further probes with animals are necessary to explore to what degree shielding against those ionizing (Van Allen) radiations will be necessary. Uncertainty concerning tolerability of zero gravity over longer periods of time . . . may have a delaying effect on manned space operations."

Before the Soviet scientists and engineers boosted a man into space, they conducted an orderly and increasingly sophisticated program of putting animals into the space environment. Their most publicized animals were dogs, but they used many other species, culminating with the "zoo" or "menagerie" experiment in 1958. Professor Parin, one of the Soviets' most noted biomedical scientists, implied in some of his informal discussions at an international meeting in Florence, in May, 1964, that the Soviets had the life-support system to keep man in space for prolonged periods —a month and more—but that they weren't attempting such an experiment because, to quote his own words, "There is more we have to learn before we do so."

After a lapse of some years, the Russians are again working with various species of animals in space flights. Their most interesting findings weren't in organ systems, but in bone marrow. Soviet geneticists found abnormal cell forms in the microspores of tradescantia and in the marrows of mice and other animals, after exposure to the space environment for as short a period as 24 hours. The abnormal mitotic effects ranged from multi-polar division figures to changes in the axial direction of spindles in the tradescantia. Abnormal cell forms increased with the duration of flight, and the percentage of abnormalities decreased considerably 48 hours after return to earth. And we are talking about very low orbits, up to not more than 250 miles at apogee. These findings suggest bewilderment of the components of the cell—like the liquid fuel in the Atlas.

It is premature to ascribe these effects to the weightless condition alone, for vibration and cosmic radiation may play a part. Radiation certainly can cause such changes. I doubt if vibration will be important. We must know for sure by 1970, at the latest. At the outset, quite obviously, no man is going to spend more than a few days in space, and certainly interplanetary exploration is not going to be attempted until we know whether the cell—the unit of life itself—can function and reproduce normally.

Our initial concern is for the cells with the shortest life span. Blood platelets have an approxi-

mate life of eight to 11 days. White blood cells of the granulocytic series, determined by DFP-32 labelling, have a turnover time of 160-260 hours for the mitotic, maturation and storage pools of the bone marrow. Their life span prior to entry into the tissues is estimated at 6½ to 11 days. Once they have crossed into the tissues, they do not return to the blood stream. The granulocyte turnover rate, therefore, is 172 x 10^7 Kg., or 7.2 x 10^7 per hour.

Lymphocytes live 100-200 days and perhaps much longer, though about 20 per cent of them seem to have a much shorter life, on the order of three to four days. Nonetheless, lymphocytes disappear quickly if production is terminated.

Red cells live 100-130 days (average 120). Three million red cells are released from the bone marrow every second to replace an identical number of aged red cells which are removed from the blood stream in one second. This is a continuous process. The same is true of white cells and platelets. Any significant disruption of this dynamic process is incompatible with well-being.

We simply don't know how these cells will behave in a zero gravity, degaussed environment.

Since animal cells and human cells act similarly, we should devise a means of inserting various species of animals from mice to chimpanzees into orbit, in a life cell, for periods of 30 to 90 days and longer, and then recovering them for prolonged observation and study. One important reason for doing so is that we know cancer of various types occurs when cell division is altered for one reason or another.

Other cells—in fact, all types of them—need to be studied similarly. These studies should be done simultaneously with incremental increases in manned orbital flights of from four to 14 days. Only when we are certain of man's safety should we permit human beings to venture further into space.

SPECULATIONS

Long-term speculations about space exploration have to do with the checking out of some of Einstein's theories of time and relativity. This verification is of interest to all the humanities, including medicine. It may come sooner than we think, for our tendency has always been to underimagine the future. We have usually overestimated what we can do in a year or two, and have underestimated the technologic advances which would accrue within a decade or a generation. By the year 2000—that's 35 years from now—what may be happening?

THIRTY-FIVE YEARS, 1930-1965

Just for comparison, let's go back 35 years and see how technology has changed. It had not been three years since Lindbergh's pioneer flight to Paris. Iowa's only occupant of the White House was struggling with a faltering economy. Our young aviators were learning to fly the hottest aircraft we had—the P-6 and P-12. Our late martyred president was not yet 13 years of age. We were a decade away from antibiotic medications, and the Model-A Ford was just replacing the Model-T. It would be nearly three years before an individual named Schicklgruber would head the Third Reich as Adolf Hitler, and Dwight D. Eisenhower was a brand new major. The radio with separate speaker was in vogue, and practical television was just a vision.

Compare the communications capability of 35 years ago with that which we shall soon have. By 1967, three communications satellites, spaced 120° apart at an altitude of 22,000 miles, will provide a global telephone, telegraph, television and radio transmission system of sufficient traffic-handling capacity to serve the entire earth.

Technology has literally exploded. More scientific advances have been made in the last 35 years than in all prior recorded history!

The late Dr. Eugen Sanger, director of the Institute of Jet Propulsion Physics at the Technical University of Stuttgart, describes how Einstein's theory would work on a space flight from earth to a star a thousand light years away. The space ship would use photon power and would travel at close to the speed of light. It might take the crew 11 years by space-ship time to reach the star, but on earth a thousand years would have passed. If, on reaching the star, the voyagers immediately began the journey back, they would arrive on earth 22 years from the time they left it. During that period 2,000 earth years would have gone by.

A relativity check with atomic clocks may have been made within the next decade. Such a clock, placed in an earth satellite, might measure gravitational fields in certain areas of space. Compared with gravitational fields of earth, it could provide verification of the time-gravity aspects of relativity.

As an offshoot of space explorations, Dr. Glauco Partel, founder of the Italian Rocket Association, foresees (1) jet underwater craft which could be converted into aircraft, (2) underwater cargo ships, (3) studies on plankton as a fuel of the future for hydroramjets, (4) the use of the ocean depths as the biggest launching pads in the world, having the huge advantage of being concealed.

Thus, our technologic advances in outer space may have great impact on advancing our knowledge of "inner space." The challenges to the space scientist, physician and engineer are vast beyond comprehension.

Referring to the dawning of the space age, I should like to close with a few sentences from a paper written in early 1960 by Father (Major) Ward Bowler (formerly a teacher and coach at Dowling High School, Des Moines): "The United States stands today at an all-time pinnacle of material success. Inherent in her people lies the greatest promise a nation has ever known. . . . Ours is

the opportunity to cooperate with, yet to lead, the people of the world into an era of peace and prosperity, of intellectual and moral enlightenment so excessive of present standards and ideals as to seem fantastic. . . . To accept such a challenge, to carry it through, would be to crown the efforts of men of enlightenment of all ages."

And let me add a word of caution from John Loosbrock, editor of AIR FORCE AND SPACE DIGEST: ". . . Two centuries are hardly more than a passing moment in the eons of history. Great empires of the past have flourished for hundreds of years against the less than 50 in which we have been predominant. The measures of national greatness are changing, and the cycle of history is accelerating. Today technology, which knows neither geographical limitations nor ideological loyalties, is the pacing factor of progress and achievement. And technology, unlike a deposit of oil or a fertile valley, cannot be a unique possession. In the long run, it becomes available to all who have the wit and the wisdom to use it."

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Coronary Heart Disease and Anticoagulants

JOHN C. HOAK, M.D.

Iowa City

INSTEAD OF TALKING about what is new in the use of anticoagulants for patients with coronary heart disease, I would prefer to discuss some important facts about coronary-artery disease and thrombosis that are not particularly new, but too often are unknown or unappreciated by clinicians. These factors are fundamental to an understanding of the disease process and to an appraisal of the possible value and limitations of anticoagulant therapy.

It is universally acknowledged that occlusive disease of the coronary arteries almost invariably accompanies myocardial infarction. No such agreement, however, exists with regard to the frequency of coronary thrombosis in the infarcted heart. In the carefully performed autopsy study of Ehrlich and Shinohara, the following results were reported.[1] The examination of the heart by conventional technics at autopsy in 130 patients who had recent myocardial infarctions revealed coronary-artery thrombosis in only 57, or 44 per cent. Special methods, utilizing serial block sections, were employed in another part of the study. In 38 patients who had recent myocardial infarctions, recent thrombosis of a coronary artery was found in only 19, or 50 per cent. Therefore, 50 per cent of patients who died following recent myocardial infarction did not have thrombosis involving the coronary arteries.

There is other evidence to suggest that coronary thrombosis might even be a complication of myocardial infarction, rather than a cause. Spain and Bradess found that the greater the lapse of time between onset of acute symptoms and death, the greater was the incidence of coronary thrombosis.[2] There were 303 patients who died within one hour after the onset of their acute symptoms. Although most of them had atherosclerotic occlusion of the coronary arteries, an actual thrombus was found in only 49 instances, for an incidence of 16 per cent. Sixty-five patients lived longer than an hour, but died within the first 24 hours. Twenty-four, or 37 per cent of that group, had coronary thrombosis. In the group of 200 patients who died 24 hours or more after the onset of acute symptoms, 109 or 54 per cent had thrombotic occlusion of the coronary arteries.

We must realize that in 50 per cent or more of cases, myocardial infarction is not accompanied by coronary thrombosis, and consequently that even with the use of a perfect anticoagulant, 50 per cent or more of the cases of myocardial infarction might still occur.

For too long, clinicians have tried to explain the lack of thrombosis at autopsy in a patient who died

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following myocardial infarction by blaming the pathologist for missing the thrombus which "must have been there." An equally flimsy explanation is that the thrombus was there, but that it lysed and disappeared. The latter explanation reminds me of the story about the "scientist" who tried to explain the disappearance of milk from a pan in a room where he had guarded the door for a very long time. He knew that black cats drank milk, and although he didn't find a black cat in the room before, during or following the disappearance of the milk, he felt sure a black cat had been there. If not, he reasoned, how else could the milk have disappeared? He came up with the obvious conclusion. There must be something wrong with his vision, for he had not seen the black cat which must have been there. This story illustrates the fallacy of trying to explain phenomena that have common features by attributing them to a single known mechanism, when a total understanding of the problem requires knowledge that remains to be discovered. When this erroneous approach is taken, it leads to confused thinking, and delays the acquisition of the knowledge necessary to provide a complete understanding of the problem.

The next point which is pertinent to this discussion is the difference between anticoagulant activity and antithrombotic activity. Oral anticoagulant drugs such as warfarin and dicumarol achieve their effects by inhibiting the production of clotting factors by the liver. There are four of these: factor VII, factor IX, factor X and prothrombin. I should remind those who are unfamiliar with this terminology that factor IX is the factor deficient on a congenital basis in the hemophilioid disorder known as Christmas disease. When oral anticoagulant therapy is started, not all of these four factors are depressed at the same rate or to the same degree. One attempts to produce a controlled hemophilioid state, where the patient walks a tight rope between thrombosis on one side and hemorrhagic complications on the other.

Heparin does not produce a deficiency of clotting factors, but interferes with clotting at three different stages. It prevents the formation of blood thromboplastin, inhibits the conversion of prothrombin to thrombin, and prevents the change of fibrinogen to fibrin by the action of thrombin. Since heparin does not produce a deficiency of coagulation factors, there is no lag phase either for producing the anticoagulant effect or in recovering from it when the antidote, protamine, is given.

One assumes that a patient, treated with oral anticoagulants, has effective anti-thrombotic activity when the prothrombin time is within the therapeutic range. This may or may not be true, depending upon the potency of the thrombogenic stimulus and other influences. In both clinical and experimental situations, one occasionally sees hemorrhage and thrombosis simultaneously. In an experimental study we found that even when, by giving warfarin to dogs, the prothrombin time had been prolonged to four times the usual value, the massive generalized thrombosis still resulted occasionally when a potent thrombogenic substance was given.[3] Clearly, anticoagulant activity can be present without the desired antithrombotic effects.

There is one other simple concept that is involved in studies of patients with coronary heart disease who are treated with anticoagulants. There is a tendency for some enthusiastic investigators to ignore some facets in the care of such patients, and to focus their attention upon the anticoagulant treatment as the sole factor responsible for their survival.

Recently we had a patient who was admitted for treatment of an acute myocardial infarction. On admission, the electrocardiogram showed the changes of an acute inferior infarct, and a normal sinus rhythm. This patient had a history of thrombophlebitis with pulmonary infarction, and we decided to use heparin in order to provide an antithrombotic effect during the recovery period. On the day following admission, he developed multifocal premature ventricular beats. The patient was treated with quinidine, and the rhythm disturbance subsided.

My reason for mentioning this patient is to point out that he was a potential loss from the standpoint of developing a fatal ventricular arrhythmia. He made an uneventful recovery, and one might be tempted to call his case a heparin success. Likewise, if something untoward had occurred, it could have been called a heparin failure. More likely, it was quinidine that prevented a fatality, in this instance, and turned a potential heparin failure into a heparin success.

In closing, I should like to state my views on the use of anticoagulants in patients with coronary heart disease. The use of anticoagulants in the treatment of patients with acute myocardial infarction is a rational maneuver and appears to help prevent mural thrombi and to prevent the development of thrombosis within veins. Heparin is a more potent antithrombotic agent than are the oral anticoagulants, and it should be considered when such an effect is desired.

It is my belief, that there is insufficient evidence to show that anticoagulant therapy is of genuine benefit to patients with uncomplicated angina pectoris, or to those patients who have recovered from acute myocardial infarction. Thus such treatment should not be considered an essential and routine part of the long-term management of these patients.

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Detection of the Coronary-Prone Adult: The Framingham Study

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THE NATURE AND UTILITY of the epidemiologic approach to the study of disease are less immediately apparent to the practicing physician than is information concerning the diagnosis and treatment of already-existing disease. Epidemiology involves a study of the circumstances under which a disease arises and flourishes in a particular environment. It often holds the key to the prevention of disease long before the essential cause has been delineated, and it may enable the physician or public health official to diagnose a disease while it is still *on its way to happening.*

By examining the habits, environment and personal attributes of those developing disease over a long period of observation, in comparison with the same characteristics in people who remain free of it: (1) factors associated with excess risk can be identified; (2) highly susceptible individuals can be delineated; (3) the magnitude of excess risk associated with each factor can be estimated; (4) clues to pathogenesis can be discerned; and (5) a better understanding of the natural history can be derived.

This approach to the study of coronary heart disease (CHD) has been employed at Framingham since 1949, through biennial examinations of 5,127 men and women 30 to 60 years of age for initial development of CHD. Details of the study design and reported results have been published elsewhere.[1, 2, 3, 4]

NATURAL HISTORY

A consequent knowledge of the natural history of CHD has served to emphasize the importance of a preventive approach in this disease. Its importance as a cause of death and disability has become readily apparent. In 10 years, one in 10 of the men and one in 20 of the women develop the disease. It is an extremely common entity, even in the hardier female sex (Figure 1). Not only was

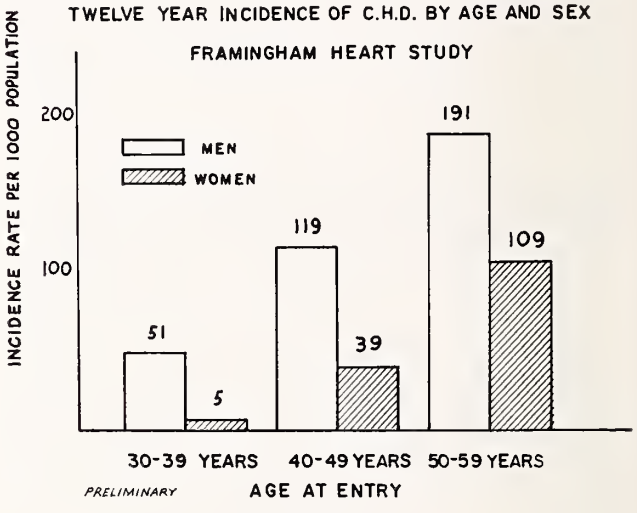


Figure 1

CHD very common, but it also was frequently fatal, with an overall case fatality rate of about 32 per cent in the acute phase of a heart attack. The critical period in a "heart attack" appeared to be the first few minutes, and 54 per cent of all deaths occurred in the acute phase (within three weeks). (Figure 2). About 40 per cent of the persons who sustained heart attacks were not hospitalized. Of those people, approximately 40 per cent died suddenly outside the hospital. Of those who were not hospitalized but who survived, about one-half had unrecognized myocardial infarctions detected only by routine biennial electrocardiograms. If sudden deaths are excluded from consideration, the case fatality rate among those not hospitalized was almost identical to the rate among those hospitalized (Figure 3). Although it is possible that those initial unrecognized myocardial infarctions may have been milder than those recognized, the subsequent morbidity and mortality experience of persons with these unrecognized infarctions suggests otherwise. The recurrence rate in five years was no lower (about 30 per cent), and the percentage of fatalities during acute attacks (about 50 per cent)

The authors are staff members of the Heart Disease Epidemiology Study, Framingham, Massachusetts, and the National Heart Institute, National Institutes of Health. Dr. Kannel read this paper at the Iowa Medical Society's annual meeting in Des Moines on April 12, 1965.

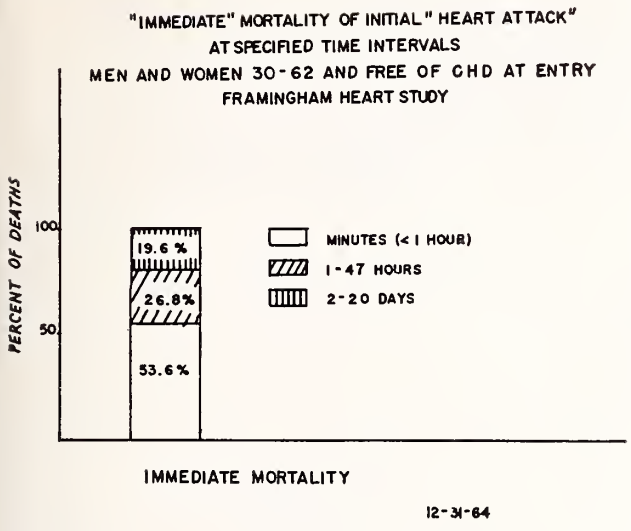


Figure 2

were no different from those which were noted in those with recognized infarctions (Figure 4).

While it is desirable and worthwhile to develop improved methods for salvaging potential fatalities

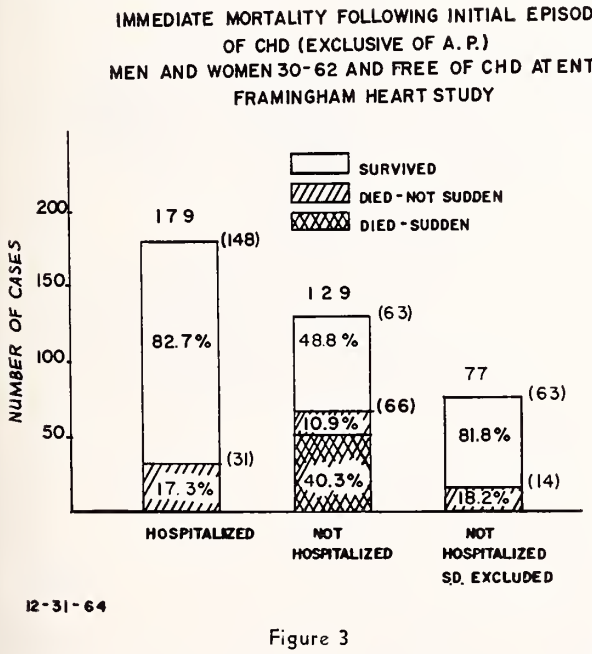


Figure 3

among those who have survived long enough to enter a hospital following a heart attack, a significant lowering of morbidity and mortality from CHD will be achieved only through the adoption of a vigorous preventive approach to the problem. The physician must learn to diagnose *existing* occult asymptomatic disease, and even better, he must learn to detect the coronary-prone individual.

DETECTION OF THE CORONARY-PRONE

As indicated by the extremely high incidence of CHD and the almost universal prevalence, at the postmortem table, of at least moderate degrees of

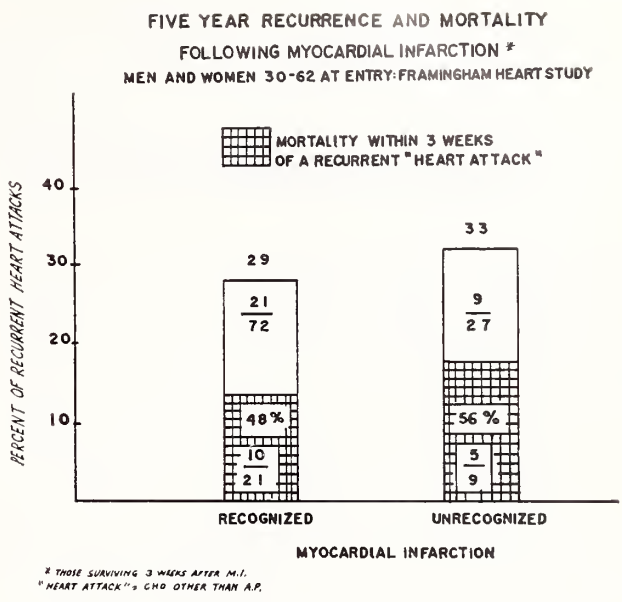


Figure 4

atherosclerotic involvement, practically every adult in the U. S. A. is susceptible to CHD. But some people are more susceptible than others.

Age and Sex. In both sexes, quite clearly, susceptibility increases with age. The male, however, is more susceptible than the female. Women develop myocardial infarction with comparable frequency, some 20 years later in life, but overall, more men than women develop the disease, and they are more susceptible to the lethal forms of the disease (Figure 5). Only angina pectoris has similar incidences in the two sexes (Figure 6).

Lipid and Blood Pressure Levels. Assessment of lipid and blood pressure levels provides the key to an identification of the coronary-prone individual. Although almost every lipid identified in the blood has been implicated in atherogenesis, the total cholesterol level is still at least as reliable as any of the others thus far tested, prospectively, as a predictor of CHD.[4] The risk of developing CHD rose progressively with the antecedent serum-cholesterol level from the lowest to the highest level observed in the population. Serum cholesterol was an excellent predictor in men of all ages, but the earlier in life the determination was made, the steeper were the risk gradients. In women beyond age 50, serum cholesterol appeared to have no predictive value (Figure 7). Within the usual range of values, neither any "safe" nor any distinctly "abnormal" levels have been identified. Because there is a considerable overlapping between the distribution of values observed among those who developed disease and the distribution of values found in those who remained free, no lipid level can be considered diagnostic of CHD.[4]

Similarly, the risk of developing CHD rose with the antecedent blood pressure level. The systolic level was just as useful as the diastolic, and the

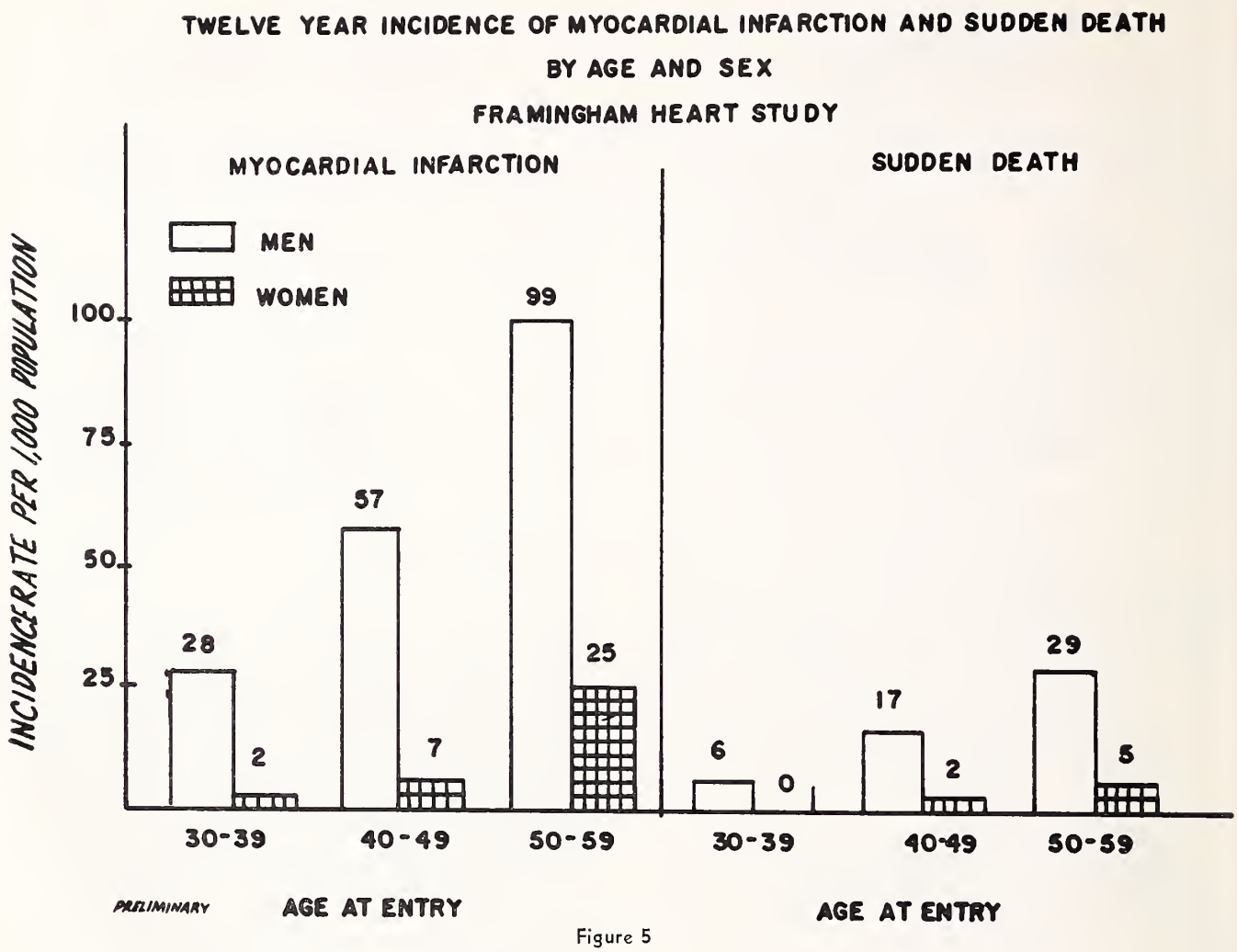


Figure 5

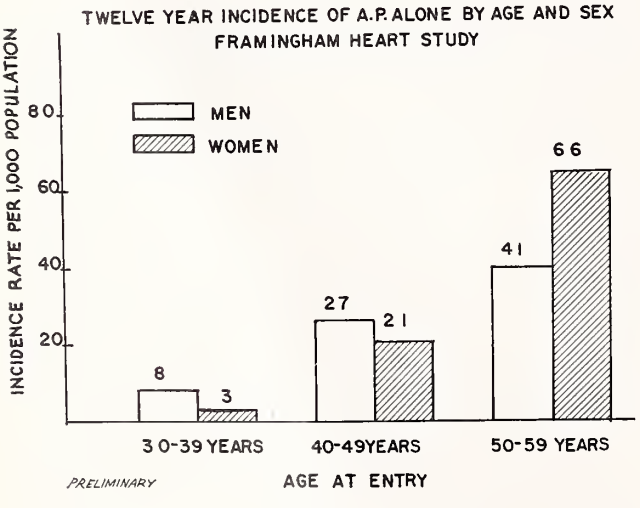


Figure 6

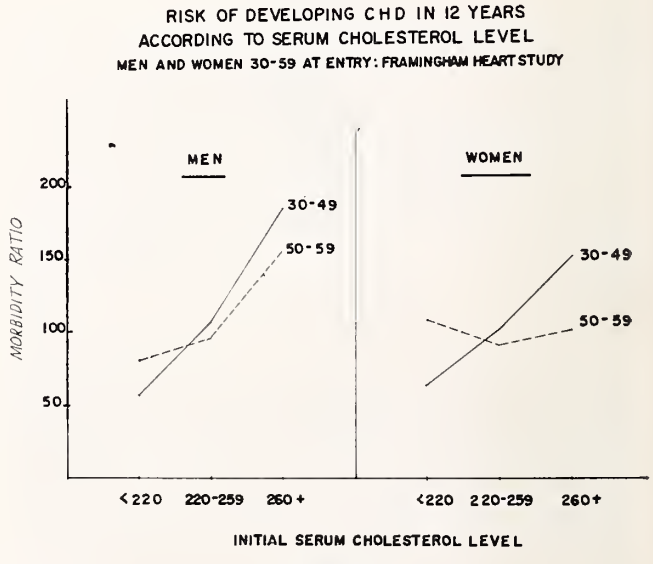


Figure 7

casual was just as helpful as the more basal blood pressure in the prediction of CHD (Figure 8).

Thus far, the interaction of the serum cholesterol concentration and the blood pressure appears to constitute the principal determinant of CHD risk. The incidence of disease at any given value of one rises with increasing levels of the other (Figure 9).

Those presumably predisposed to atherosclerosis through an elevation of the cholesterol and blood pressure levels were extremely susceptible if, in addition, they were heavy cigarette smokers, if

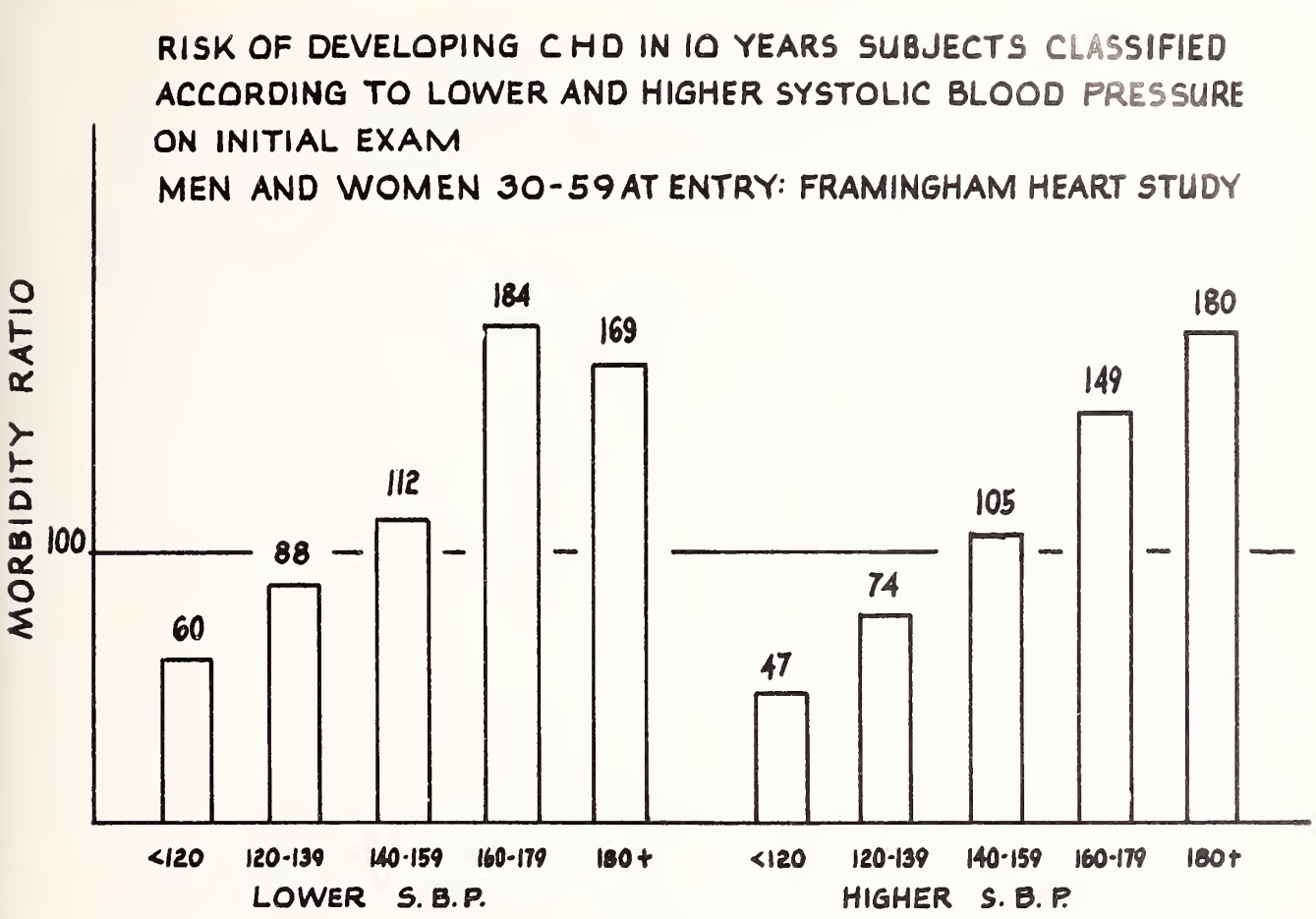


Figure 8

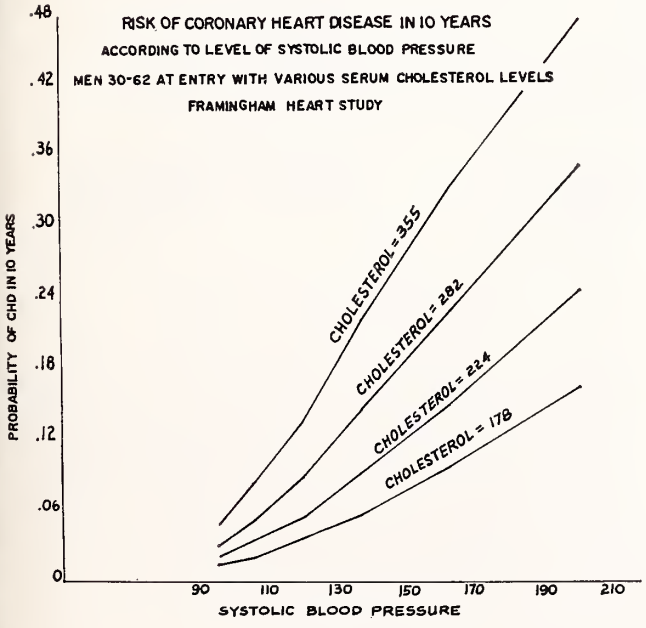


Figure 9

they had a low vital capacity, or if they had EKG abnormalities. Those who were so predisposed and who, in addition, were overweight were found highly susceptible to the development of angina pectoris and sudden, unexpected death (Figure 10.) In persons with these combinations of risk factors, there appears to be every justification for vigorous attempts at prevention.

Genetic Factors. A number of factors that are presumably genetic have been implicated as increasing the propensity to develop atherosclerosis in general, and CHD in particular. Persons with *familial lipid disorders* such as hypercholesterolemia, with or without elevated beta-lipoproteins or triglycerides, have been shown to develop a premature, profound and accelerated form of

Explanation of Abbreviations Used in the Figures

AP	Angina pectoris
SD	Sudden death
SBP	Systolic blood pressure
Chol.	Cholesterol
V.C.	Vital capacity
EKG	Electrocardiogram
LVH	Left ventricular hypertrophy
IVB	Intraventricular block
N.S.A.	Nonspecific abnormalities
F.R.W.	Framingham relative weight
HBP	High blood pressure
M.I.	Myocardial infarction
CI	Coronary insufficiency
AF	Atrial fibrillation

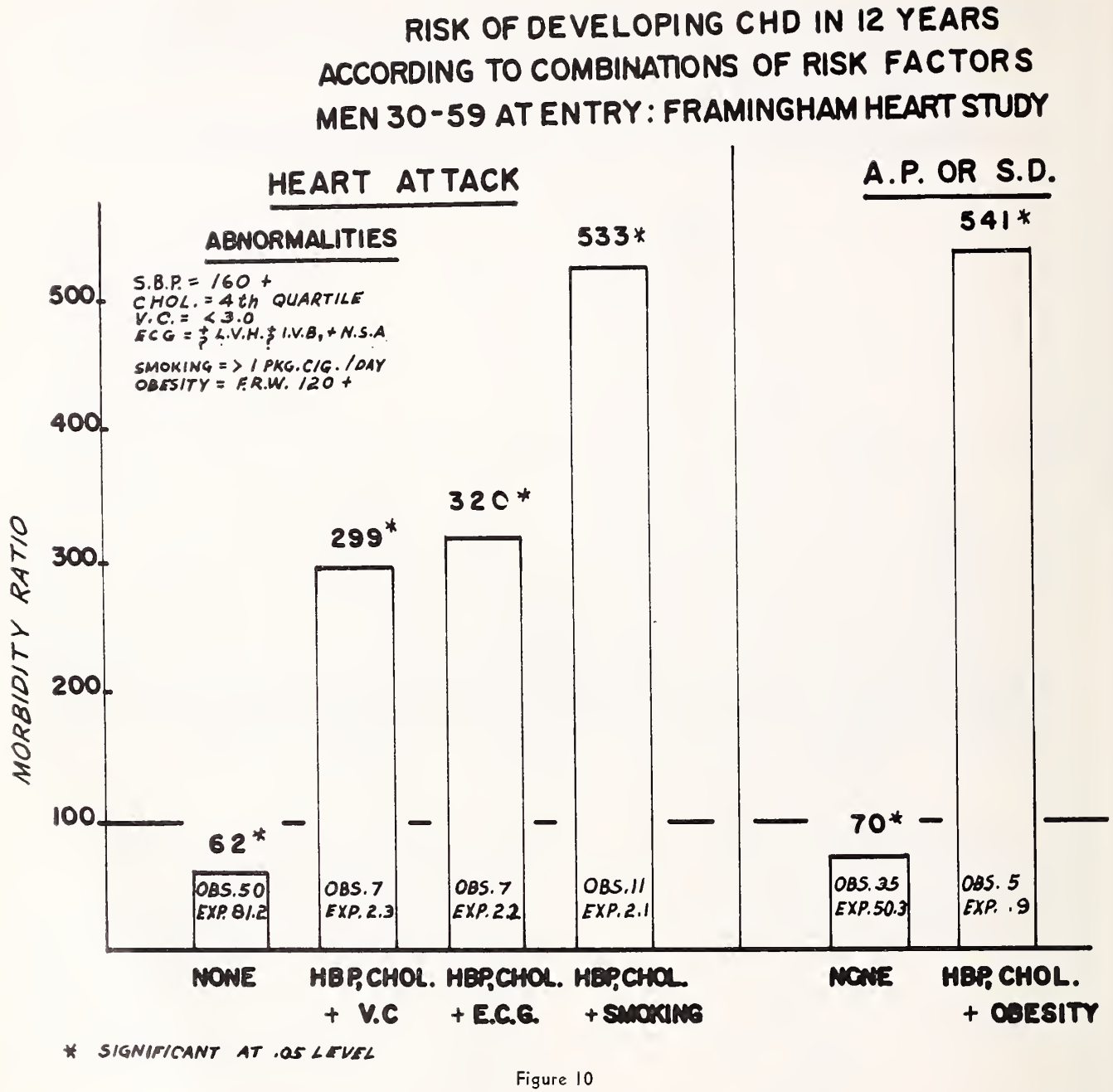


Figure 10

atherosclerosis. Stigmata such as xanthomata, serum cholesterol levels in excess of 400 mg. per cent, a milky fasting serum and a history of CHD in multiple close blood relatives very early in life should alert the physician to the possibility of a serious familial lipid disorder. Such a patient requires and deserves detailed lipid analysis to determine which type of lipid disorder exists and the mode of therapy that is likely to succeed. However, only a small proportion of the coronary-prone individuals whom one encounters in the daily practice of medicine have such lipid disorders.

Diabetes or the prediabetic state more commonly increases the propensity to atherosclerotic disease. In this regard, just a family history of diabetes may be important, and may justify further evaluation and concern. Also, the gouty patient was observed to have an excess risk of CHD. Surprisingly, many short women and subjects with weak handgrips appeared to develop the disease. These latter require further study. A family history showing that the patient's relatives developed CHD at early ages may be considered a risk factor (Figure 11).

DETECTION OF ASYMPTOMATIC EXISTING DISEASE

A later stage of preclinical CHD, occult *existing* disease, also probably can be detected years in advance of the onset of symptoms. Although conclusive evidence is lacking, some combinations of risk factors strongly suggest already existing disease.

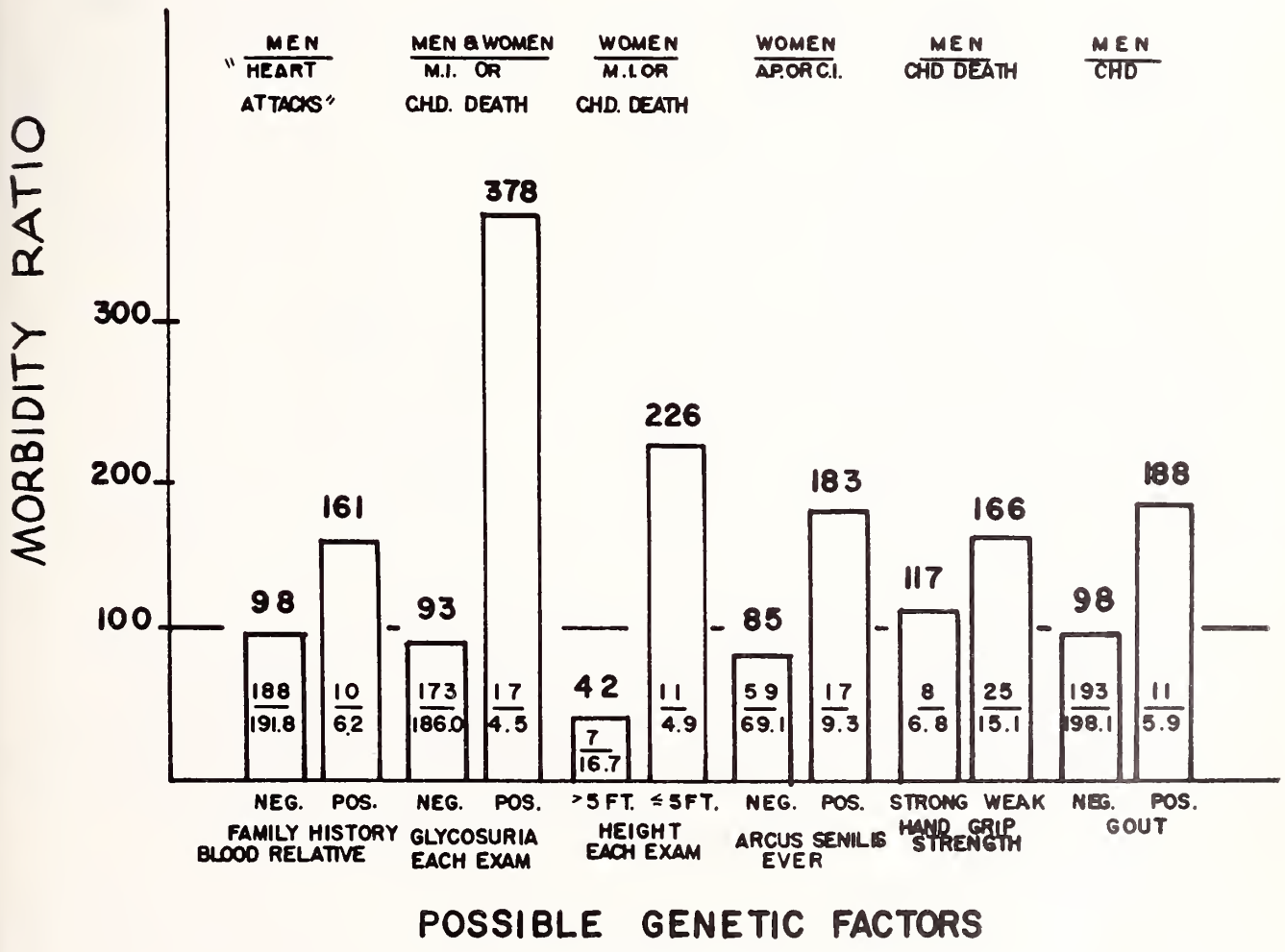


Figure 11

Certain otherwise unexplained electrocardiographic abnormalities in apparently well individuals, probably reflect underlying occult disease. The electrocardiographic finding of left ventricular hypertrophy, in any blood pressure category, was associated with a marked excess of CHD. Also, intraventricular block, whether right or left, was distinctly associated with a high rate of development of CHD. Nonspecific abnormalities were likewise associated with an excess risk, as was atrial fibrillation (Figure 12). These abnormalities, particularly when associated with an elevated blood pressure and an elevated serum-cholesterol level, identify individuals who are very highly susceptible and who are more than likely to have occult CHD (Figure 10).

Another indisputable indicator of occult CHD was the presence of electrocardiographic evidence of myocardial infarction in persons with no knowledge of having had a "heart attack." Such findings were far from rare, since one in every five electrocardiographically proved myocardial infarctions detected in Framingham had previously gone unrecognized. These persons had the same serious prognosis as did survivors of recognized myocardial infarctions (Figure 4).

There is good evidence that CHD is not simply the inevitable consequence of advancing age and inborn metabolic errors determined at the moment of conception. Many observations point to potent environmental influences, and there is mounting evidence that habits and way of life are related to the incidence of CHD. *Cigarette smoking* deserves special comment as a habit contributing quite significantly to the development of CHD. As compared to non-smokers, heavy smokers were far more likely to die from CHD (Figure 13).

Of interest from a preventive and pathogenetic

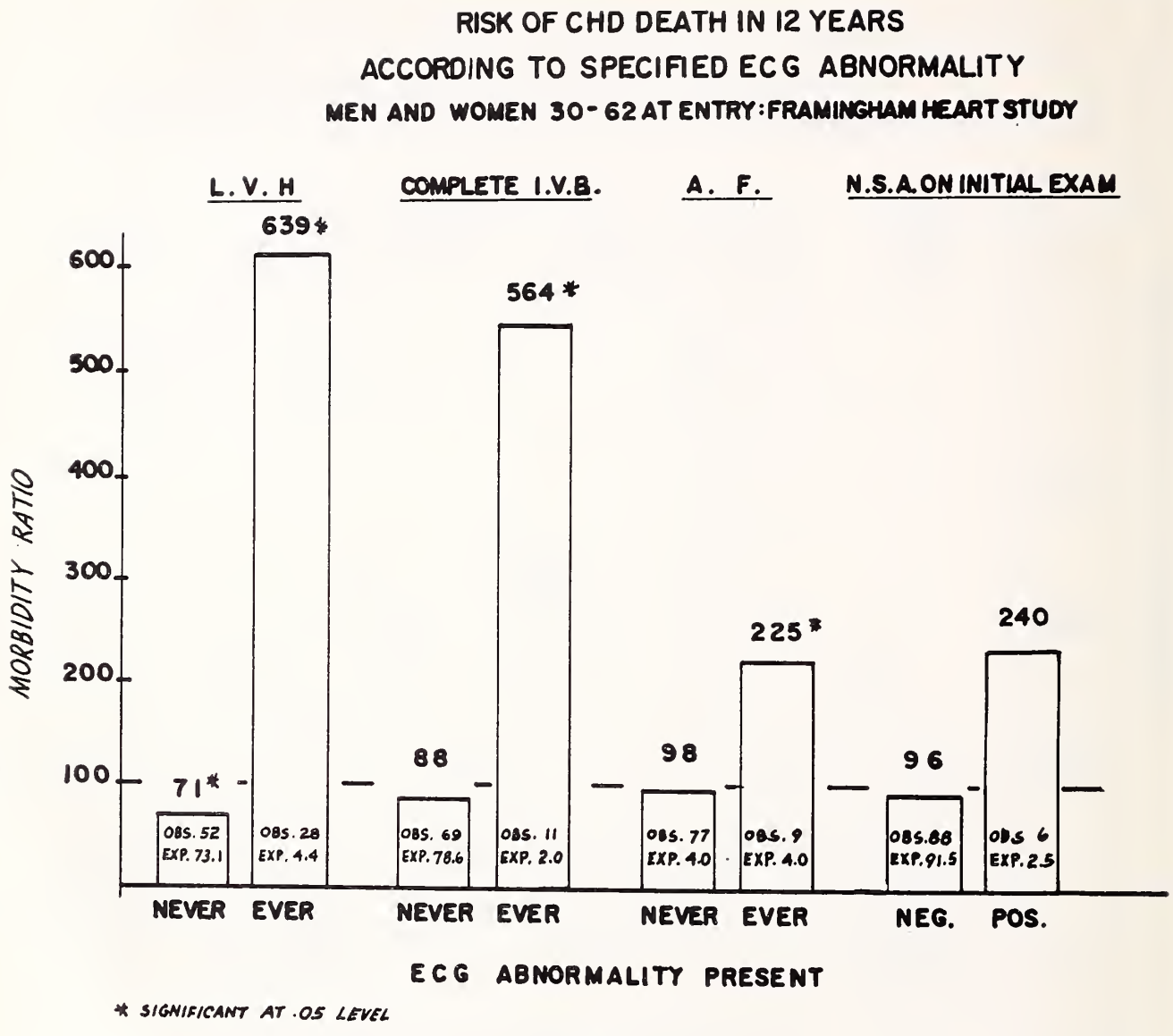


Figure 12

viewpoint, however, there was no evidence of a cumulative effect of cigarette smoking on cardiovascular disease. The risk was definitely related to the current number of cigarettes smoked daily. Ex-smokers appeared to revert rapidly to the same low risk as those who never smoked. Evidently the tobacco smoke must be inhaled if it is to affect the cardiovascular system adversely, since cigar and pipe smokers had no excess risk (Figure 14). Furthermore, the risk was not related to the *duration* of the cigarette smoking habit (Figure 15). Cigarettes were shown to make a significant contribution to risk independent of the blood pressure, serum cholesterol, vital capacity or relative weight.

The pathogenetic mechanism most consistent with the evidence would be a triggering of a lethal arrhythmia or thrombosis in subjects predisposed by an already compromised coronary circulation. Apparently, the responsible agent in cigarettes is the nicotine content of the tobacco smoke (1-2 mg. per cigarette), which produces an autonomic stimulation like that produced by an injection of epinephrine. It is not surprising, therefore, to observe that subjects who were predisposed by hypertension and an elevated serum cholesterol level and who smoked heavily developed a marked excess of "heart attacks" (Figure 10). High-risk persons, or subjects with existing CHD, should no more be allowed to continue to smoke cigarettes than to self-administer multiple injections of Adrenalin daily.

CONCLUSIONS

A number of risk factors useful in identifying the coronary-prone individual have been identified.

The implications for the practicing physician seem clear. Using ordinary office procedures he can identify highly susceptible individuals in his prac-

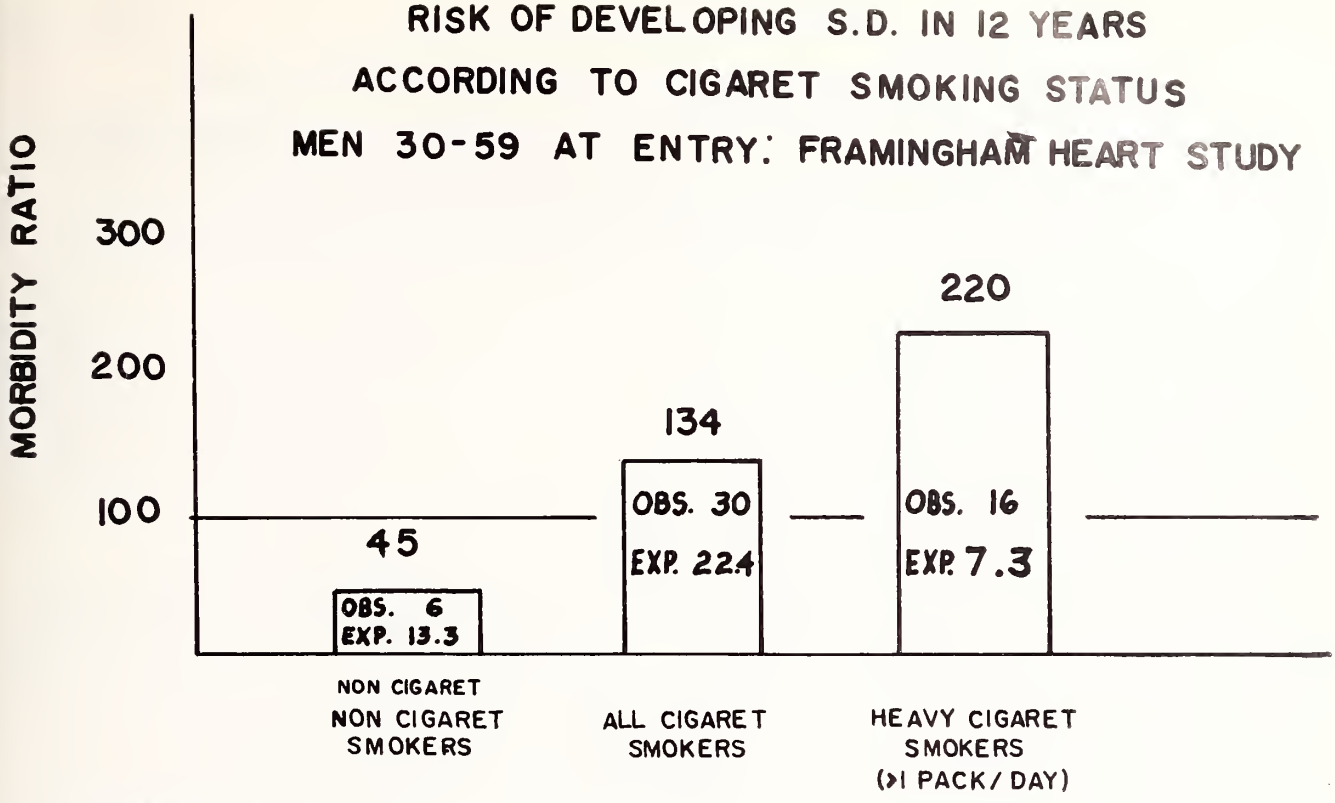
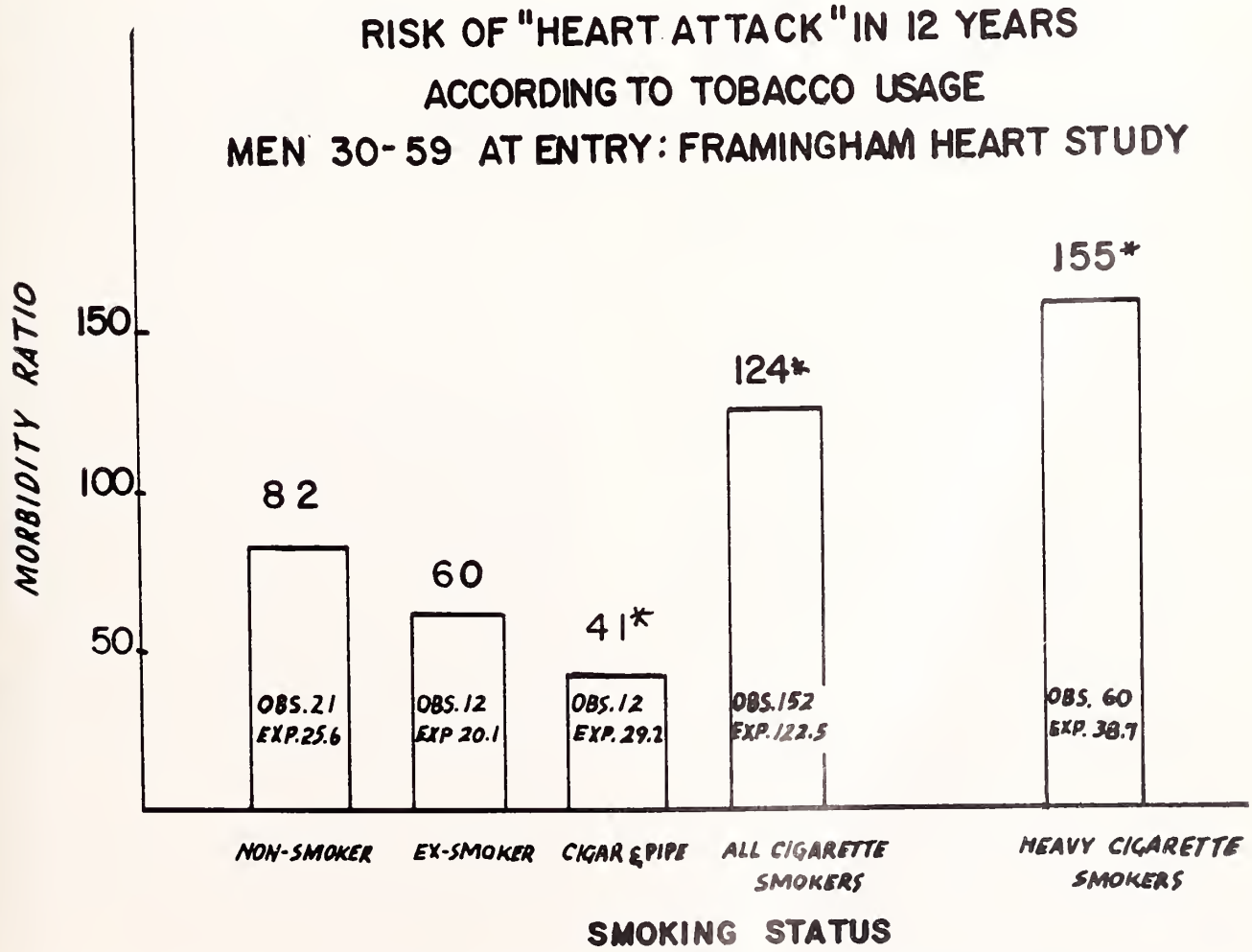


Figure 13



"HEART ATTACK" - CHD OTHER THAN A.P. : M.I., C.I., S.D., CHD. DEATH NOT SUDDEN

* SIGNIFICANT AT .05 LEVEL

Figure 14

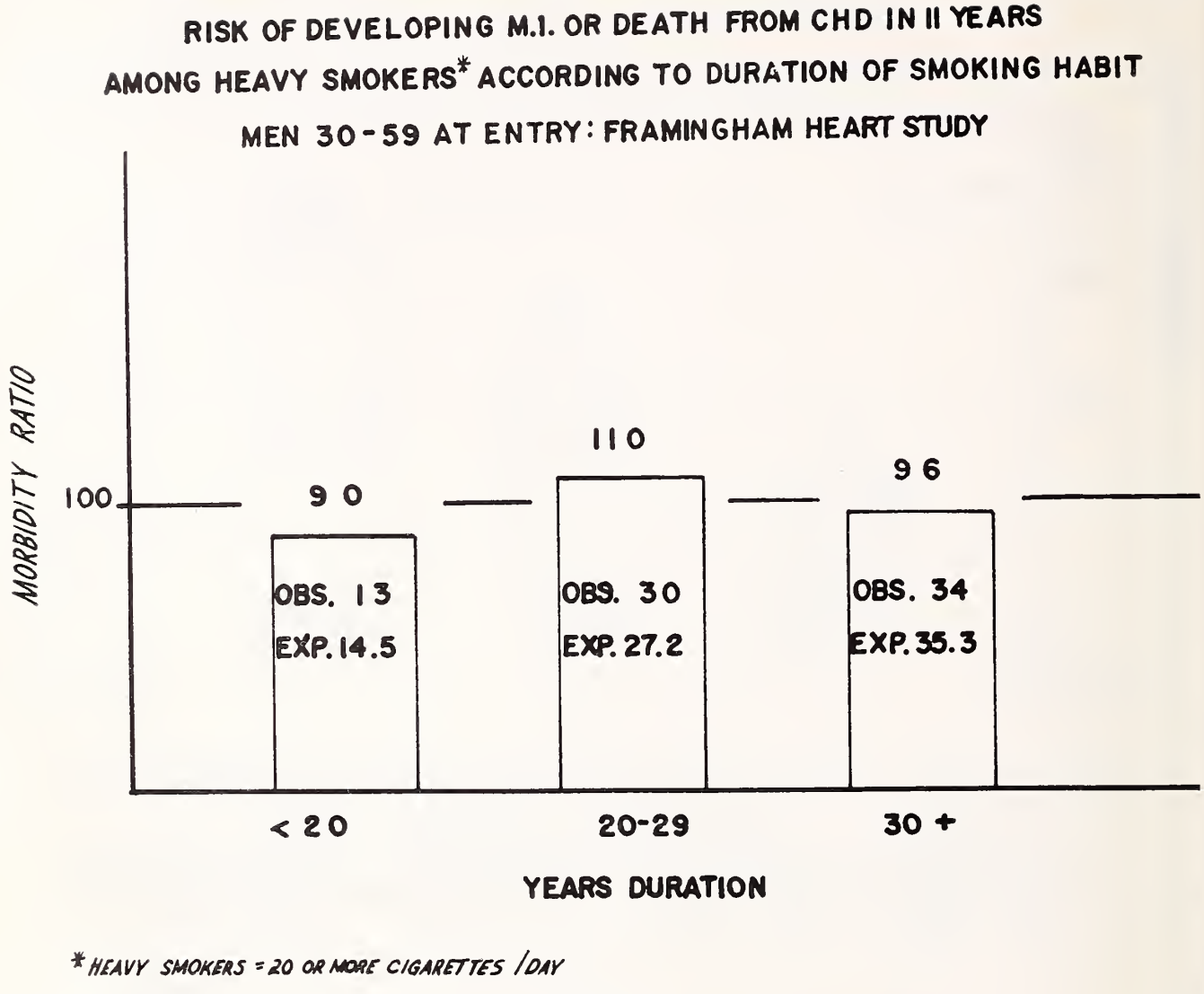


Figure 15

tice, and he can roughly estimate the risk they run. The risk factors themselves suggest the appropriate prophylactic measures, and point to a safe and sane program of prevention for susceptible individuals.

Seldom has the physician had such an opportunity to detect potential victims many years before the onset of overt symptoms, and hopefully in time for prophylactic measures to prevent, or at least delay, symptomatic and possibly lethal disease.

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Social Security Taxes for the Physician

Doctors of medicine who are self-employed are now included under the Old-Age, Survivors and Disability program of Social Security, effective for the taxable years "ending on and after December 31, 1965." This means that the self-employed physician must pay 5.4 per cent on the first $4,800 of his net earnings for 1965. This tax is to be reported on Schedule SE of his income tax return, and must be paid on or before April 15, 1966, or at the time his final income tax forms are filed.

For the calendar year 1966, his rate will be 6.15 per cent, and it will apply to the first $6,600 of his net income. This *includes* a tax of 0.35 per cent of his net profit up to $6,600 for the new hospital insurance program.

A physician who has not had a Social Security Number may use his Taxpayer Identification Number, which automatically becomes his Social Security Number. This is not, however, to be confused with his Employer's Identification Number.

Vesico-Ureteral Reflux in Children

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WAYLAND K. HICKS, M.D., and
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Sioux City

Vesico-ureteral reflux is regurgitation of urine from the bladder back into the ureter. In recent years few conditions in urology have stimulated more interest than this problem. The etiology is still uncertain, and as a result there have been some indecision and confusion regarding its management. However, it appears certain that vesico-ureteral reflux is not normal, and that reflux in many instances is associated with other urologic diseases.

OCCURRENCE

Campbell[1] reviewed 722 cystograms performed on infants and children, and was unable to demonstrate reflux in the absence of an associated urologic problem. Bunge[2] examined a group of children ranging in age from 9 to 15 months, and was unable to demonstrate reflux. The absence of reflux in normal children is particularly impressive when compared to the frequency with which reflux occurs with demonstrable and co-existing urologic disease. Bumpas[3] observed reflux in 8.6 per cent of cystograms showing other urologic problems. Twelve per cent of cystograms reviewed by Campbell demonstrated reflux in children with co-existing urologic disease. St. Martin and others[4] noted reflux in 13.5 per cent of children investigated because of urologic symptoms. It may be said, then, that approximately 10 to 12 per cent of children who present urologic complaints will exhibit vesico-ureteral reflux.

SYMPTOMS

The symptoms most frequently associated with vesico-ureteral reflux are those secondary to urinary-tract infection. The usual irritative symptoms of urinary-tract infection are frequency, urgency and dysuria. In young children high fever was often seen, and occasionally there were associated convulsions. Oftentimes the urinary-tract infection failed to respond to the usual treatment program, and many of the children had histories of frequent recurrent urinary-tract infections before we saw them.

DIAGNOSIS

The frequency with which this diagnosis is made depends to a large extent upon the family physician's index of suspicion. If a cystogram is performed, the diagnosis usually is easily made. A No. 14 French red Robinson catheter is introduced through the urethra into the bladder, and about 150 cc. of 20 per cent Hippuran or a similar contrast medium is injected into the bladder. The catheter is then removed, and an x-ray is taken while the child is straining to urinate. After about a 10- or 15-minute delay, another x-ray is taken while the child is urinating. For this diagnosis a voiding cystourethrogram is generally more helpful than is the initial x-ray. If the child cannot urinate voluntarily, a general anesthetic is given, and the child will almost always urinate during the induction of the anesthetic. The urethra is then calibrated and dilated to a No. 30 French if urethral stenosis is found. The stenosis is most commonly found either at the urethral meatus or just inside the meatus. If the stenotic area is sufficiently dilated, there will be a relaxation of the narrowed area, and further dilatation can easily be accomplished. On occasion, the stenotic area "gives way" when the urethra is dilated to a No. 18 or No. 20 French size.

In most female children with recurrent urinary-tract infection, urethral stenosis is found in association with vesico-ureteral reflux.[5] A urethral dilatation is usually sufficient to correct the narrowing of the urethra, and transurethral resection of the vesical neck is rarely required. Cystoscopy is then performed, and particular attention is paid to any trabeculation of the bladder musculature that may be present, to the appearance of the ureteral orifices, to the presence or absence of efflux and to movement of the ureteral orifices. The urine specimen is sent to the laboratory for a colony count, and sensitivity tests are performed if the colony count is more than 100,000 bacterial colonies per cubic centimeter. Panendoscopy is performed following the cystoscopy, so that the vesical neck can be visualized and the urethra inspected. It is important to ascertain the length of the urethra and the presence or absence of the urethral valves and/or urethral diverticula. Intravenous urograms are obtained either following the cystogram or the next morning before the child is discharged from the hospital. Approximately 70 per cent of the patients who demonstrate vesico-ureteral reflux will have normal intravenous urograms. It is important

that intravenous urograms should not be obtained immediately prior to the cystogram, for observation of the vesico-ureteral reflux would thus be obscured.

MANAGEMENT

Various factors may contribute to or be responsible for the recurrence of vesico-ureteral reflux, and therefore the management of this problem must vary with the factors that are responsible. In almost all cases urinary-tract infection is present, has usually been recurrent, and is the patient's presenting symptom. This urinary-tract infection may be associated with fibrosis and fixation of the ureter, and there is a loss of elasticity of the intramural ureter that destroys the valve-like action of this portion of the ureter. There may be secondary involvement of the vesical neck, with fibrosis and narrowing along with associated urethritis. Congenital anomalies such as ectopic ureteral orifices, maldevelopment of the trigone, or decrease in the length or obliquity of the intramural ureter may also be responsible. Obstructions of the vesical outlet such as contractures, median bars, posterior urethral valves or strictures of the urethra may also be contributing factors.

Once the diagnosis has been established, the etiologic factors in its origin must be determined, if possible, and corrective measures taken. If the vesico-ureteral reflux is allowed to persist, particularly in the face of urinary-tract infection, the renal parenchyma will inevitably be destroyed.

Figure 1. Intravenous urograms showed bilateral caliectasis, more marked on the left than on the right, but neither ureter appeared abnormal (Case No. 1).

Figure 2. Plain and voiding cystourethrograms demonstrated immediate left vesico-ureteral reflux (Case No. 1).

It has been our policy to treat the urinary-tract infection with nitrofurantoin, either in suspension or in pill form, to dilate the urethra every two months and also to repeat the cystogram at that time. Intravenous urograms are taken at less frequent intervals, unless there is some reason to suspect progression of the upper-tract disease as evidenced by poor response to treatment, chills or fever, and costo-vertebral-angle pain.

If the vesico-ureteral reflux persists for one year despite the above management program, whether or not a urinary-tract infection persists, then a direct surgical attack on the intramural ureter will be necessary. However if the urinary-tract infection fails to respond to this program, then surgical correction of the vesico-ureteral reflux may be necessary before the end of the year. The operative technic utilized is the formation of a sub-mucosal tunnel described by Drs. Politano and Leadbetter.[6] This technic has been quite successful in correcting the vesico-ureteral reflux without producing secondary obstruction to the urinary tract.

OPERATIVE PROCEDURES

We have seen approximately 100 pediatric patients in the last year, and 24 of those children had vesico-ureteral reflux. Six little girls with vesico-

ureteral reflux had clearing of the urinary-tract infection and disappearance of the reflux on conservative management. Six little girls required re-implantation of the ureter, and the only boy had re-implantation of one ureter and nephro-ureterectomy of the other side for severe upper-tract involvement. The remaining children are undergoing treatment at this time, and may or may not require surgery in the future. The following cases are examples of the management of various problems.

Case No. 1. The patient is a five-year-old girl who was admitted for evaluation of intermittent urinary-tract infection of one year's duration. She had mild irritative symptoms, and a good response was usually obtained after antibacterial medication, but the infection recurred a few weeks after cessation of treatment. She was found to have urinary-tract infection with urethral stenosis and left vesico-ureteral reflux. Periodic urethral dilatations were continued until the urethra would accept a No. 26 French female sound without difficulty.

Physical examination was unremarkable. Laboratory studies on initial hospitalization revealed pyuria with a urinary-colony count greater than 100,000 bacterial colonies per cc. Escherichia coli were found on culture of the urine. The BUN was initially elevated, but it returned to normal during the course of the year. Intravenous urograms showed bilateral caliectasis, more marked on the left than the right, but neither ureter appeared abnormal (Figure 1). Plain and voiding cystourethrograms demonstrated immediate left vesico-ureteral reflux, and this finding persisted throughout the course of the year (Figure 2). Cystoscopy revealed the left ureteral orifice to be gaping, and no "winking" was noted with efflux.

Initially, the bladder was trabeculated, but this phenomenon disappeared with periodic urethral dilatations. The patient was treated with Furadantin in gradually decreasing doses for approximately one year, and was asymptomatic and without urinary-tract infection during that time. Unfortunately the left vesico-ureteral reflux persisted despite the normal urine and the absence of urethral stenosis.

The preoperative diagnosis was persistent left vesico-ureteral reflux with bilateral pyelonephritis and a history of urinary-tract infection. Surgical treatment consisted of re-implantation of the left ureter and creation of a sub-mucosal tunnel. This operative procedure successfully corrected the reflux, as demonstrated by normal postoperative voiding cystourethrograms and intravenous urograms (Figure 3). The child has remained asymptomatic and has had a normal urinalysis since September, 1963, approximately two months following surgery.

Case No. 2. This three-year-old girl was referred

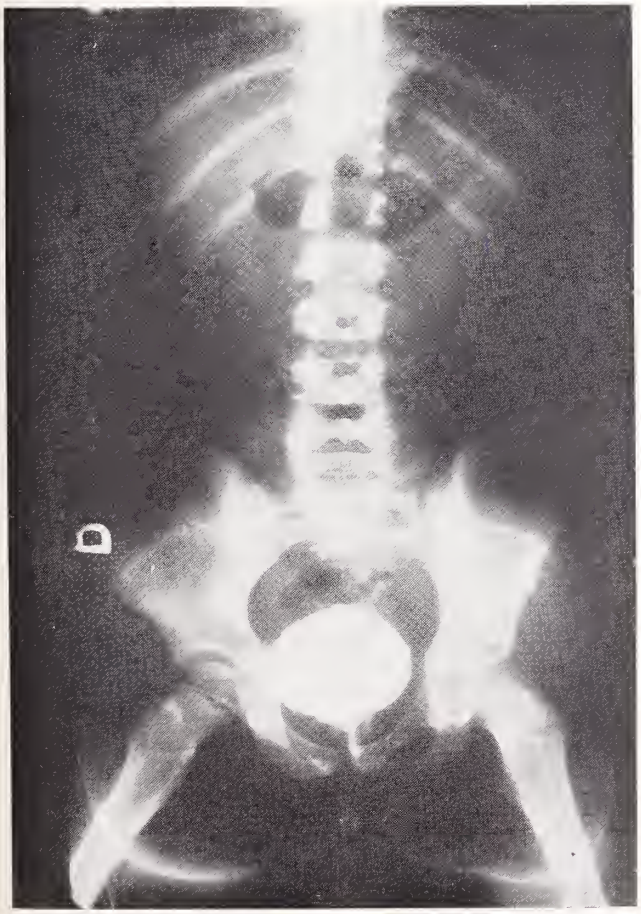


Figure 3. Normal voiding without vesico-ureteral reflux, postoperatively, in Case No. 1.

Figure 4. Voiding cystourethrogram revealed prompt bilateral vesico-ureteral reflux (Case No. 2).

to us for evaluation of chronic recurrent urinary-tract infection of one year's duration. During episodes of urinary-tract infection the child had mild irritative symptoms, but without flank pain or fever.

Physical examination was unremarkable, and with the exception of pyuria, the laboratory studies were within normal limits. A culture was not obtained. The voiding cystourethrogram revealed prompt bilateral vesico-ureteral reflux (Figure 4). Intravenous urograms showed slight bilateral blunting of the calyces, but without hydronephrosis or hydroureter (Figure 5). The urethra was very snug to a No. 26 French calibration, although cystoscopy revealed an essentially normal bladder without trabeculation and although both ureteral orifices appeared normal. A urine colony count showed no growth at the end of 48 hours.

The child was started on Furadantin, 25 mg. q.i.d., and the dose was gradually decreased until the child was taking only 25 mg. of Furadantin per day. Repeat plain and voiding cystourethrograms with urethral calibrations were performed every two months for six months, and since the last visit in January, 1965, there has been no evidence of vesico-ureteral reflux (Figure 6).

At the present time, the child is on no medication, and has gotten along very nicely without recurrence of urinary-tract infection. If urinary-tract infection and vesico-ureteral reflux should recur, surgery would then be considered.

Case No. 3. A seven-year-old boy was referred with a history of "nephritis" with intermittent hematuria for one year prior to admission. Physical examination was not remarkable, other than that the child appeared pale and perhaps smaller than might be expected for a boy his age.

Laboratory studies, however, revealed a hemoglobin of 6.6 Gm. per cent and a blood urea nitrogen of 60 mg. per cent. The urinalysis showed 2+ albuminuria with many white blood cells and an occasional red blood cell per high-power field, and no bacteria. Plain and voiding cystourethrograms were obtained, and both x-rays revealed bilateral vesico-ureteral reflux with marked distortion and tortuosity of the ureters (Figure 7). A double-dose intravenous urogram demonstrated delayed function, with right hydronephrosis and marked caliectasis. The left upper tract was not visualized (Figure 8).

Because of the difficulty of dilating the urethra periodically in a young male, a suprapubic cystostomy tube was inserted into the bladder. The patient was followed with periodic cystograms, and the blood urea nitrogen gradually fell to 30 mg. per cent. One year later there was a marked improvement in the intravenous urograms and cystogram, with decrease in the hydroureters and hydronephrosis (Figures 9 and 10).

Figure 5. Intravenous urograms showed slight bilateral blunting of the calyces, but without hydronephrosis or hydroureter (Case No. 2).

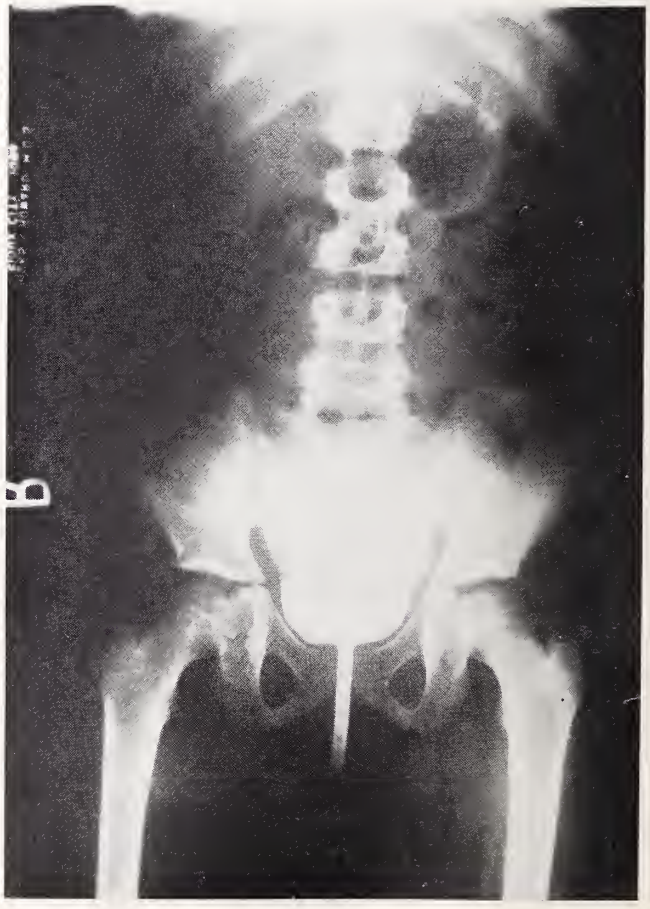


Figure 6. Following conservative management, there has been no evidence of vesico-ureteral reflux (Case No. 2).

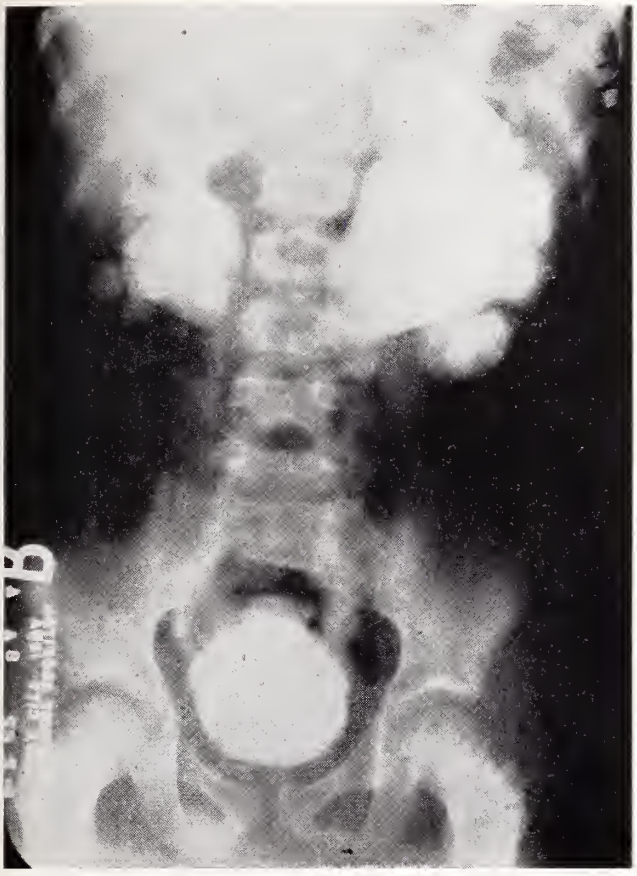
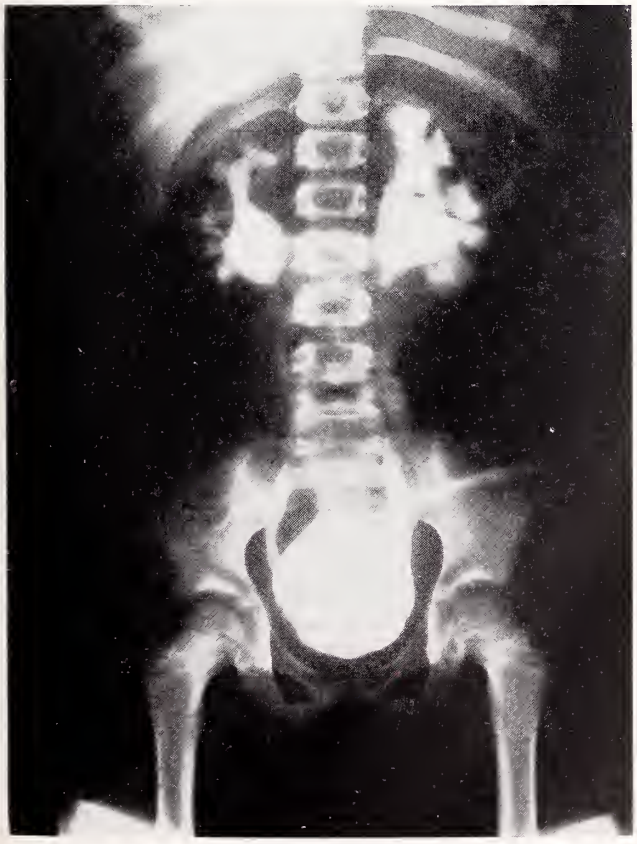


Figure 7. Bilateral vesico-ureteral reflux with marked distortion and tortuosity of the ureters (Case No. 3).

Figure 8. A double-dose intravenous urogram demonstrated delayed function, with right hydronephrosis and marked caliectasis. The left upper tract was not visualized (Case No. 3).



Figures 9 and 10. One year later there was a marked improvement in the intravenous urograms and cystogram with decrease in the hydroureters and hydronephrosis (Case No. 3).

About one year following the suprapubic cystostomy, the patient had a left nephroureterectomy and re-implantation of the right ureter. It was felt that the damage to the left kidney and ureter was of such magnitude that salvage of the kidney was impossible.

The patient did well in the immediate postoperative period. The BUN was reported as 20 mg. per cent, and the child returned to school. However, repeat intravenous urograms revealed gradual dilatation of the right ureter, although no obstruction could be found at the uretero-vesical junction, a catheter passing easily into the renal pelvis. Even though no vesico-ureteral reflux was noted, it was felt that further surgical intervention was necessary (Figure 11). Approximately eight months following re-implantation of the right ureter, an ileal conduit was performed. The child is now doing well, has normal urine, and has had no recurrence of the urinary-tract infection and no further progression of the upper-tract dilatation.

SUMMARY

Approximately 10 per cent of children with urologic problems will demonstrate vesico-ureteral reflux. Many more girls than boys will demonstrate chronic recurrent urinary-tract infection, but the reason for the disparity is not clear. The problem is not necessarily related to the short female urethra.

A voiding cystourethrogram must be performed on all children with chronic, recurrent urinary-tract infection. We feel that this examination should be performed after a girl has had two urinary-tract infections or after a boy has had his first one. If untreated, vesico-ureteral reflux will eventually lead to total renal destruction from gradually increasing back pressure and repeated urinary-tract infections. Many adults with atrophic pyelonephritis and hypertension may have had unrecognized vesico-ureteral reflux as children.

Conservative management may eliminate the cause of urinary-tract infection and vesico-ureteral reflux, but if such measures fail, surgical intervention with re-implantation of the ureters becomes a necessity.

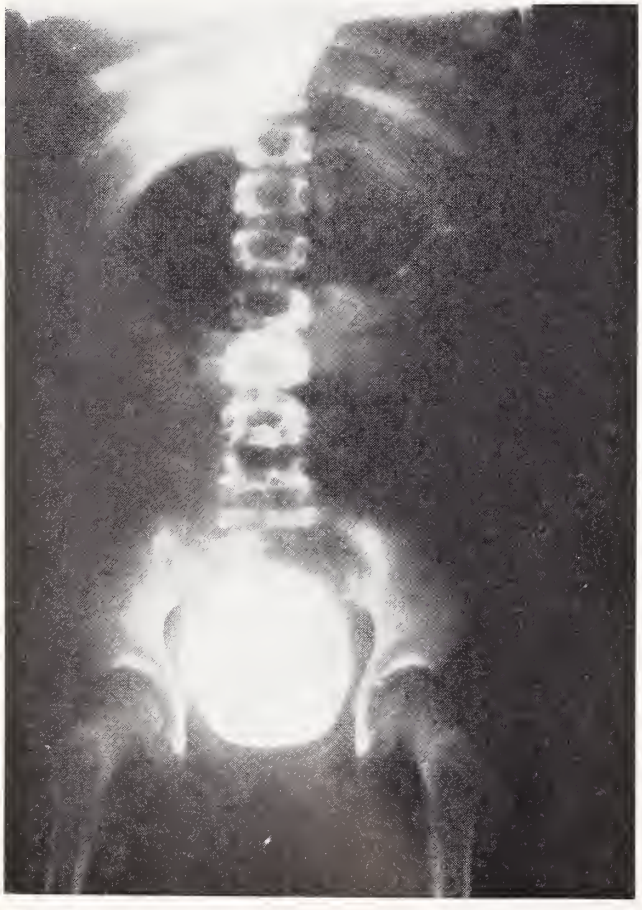


Figure 11. Even though no vesico-ureteral reflux was noted postoperatively, because of a dilatation of the right ureter, it was felt that further surgical intervention was necessary (Case No. 3).

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Is It Diabetes, or Is It Not?

New attention has been focused on the question of whether the high incidence of abnormal glucose tolerance in the elderly reflects diabetes mellitus or something else. In a study reported in the September issue of DIABETES,* 13 subjects, all 70 or older, who had had no glycosuria, were given a standard oral glucose tolerance test. Ten (77 per cent) showed blood-sugar peaks in excess of 160 mg. per cent. Yet when they were given three intravenous injections of glucose (25 Gm.), the calculated glucose disposal rates (GDR's) rose with successive injections. Though significantly inferior to those of normal young adults, those GDR's were significantly better than those in patients of comparable ages with tolbutamide-responsive diabetes mellitus.

In another study, "diabetes" was detected in 23 per cent of 1,300 elderly patients at Oak Forest (Ill.) Hospital, a rate almost 12 times greater than the national incidence among all age groups.

Because conventional test criteria necessarily classify a significant proportion of the elderly as maturity-onset diabetics, an alternative possibility would be to make the criteria age-dependent.

* By David H. P. Streeten, Ph.D., *et al.*, of the State University of New York Upstate Medical Center, Syracuse.

Pulsating Supraclavicular Tumor: A Case Report

DUANE PANSEGRAU, M.D.,
MONTAGUE S. LAWRENCE, M.D., and
JOHANN L. EHRENHAFT, M.D.

Iowa City

MOST PULSATING MASSES in the supraclavicular area are attributed to aneurysms of the major vessels within the region. We recently saw a patient with a large pulsating mass in the left supraclavicular fossa which proved to be a highly vascular tumor involving the proximal portion of the left clavicle.

CASE REPORT

A. C., a 62-year-old retired mechanic, was admitted to University Hospitals on January 30, 1965, with the chief complaint of an enlarging, non-painful mass over the left side of his lower neck, of 10 weeks' duration. His past medical history was not remarkable, aside from a subtotal thyroidectomy for benign disease 12 years previously. Physical examination on admission revealed a healthy, alert, cooperative 62-year-old white male, in no distress. The blood pressure was 198/108 mm. Hg in both arms, and the pulse rate was 72 per minute, regular and full. There was a solitary pulsatile mass measuring 6 × 8 cm. in the left supraclavicular fossa. No bruit was audible over the mass. The mass was firm and non-tender. There was no lymphadenopathy. The remainder of the physical examination was within normal limits.

Laboratory studies revealed clear urine with a specific gravity of 1.018, a pH of 5.0, and no microscopic sediment. Chemical tests for glucose and protein were negative. The hemoglobin was 13 Gm., and the white blood cell count was 11,800/cu. mm. The protein-bound iodine was 4.2 micrograms per cent. A serologic test for syphilis was non-reactive. The radioactive iodine uptake was in the euthyroid range. A scan revealed very little if any uptake over the left side of the neck, and a slightly increased uptake over the right side. There was no uptake over the pulsatile mass. A chest roentgenogram was within normal limits except for evidence of destruction of the medial one-third of the left clavicle (Figure 1). An intravenous urogram demonstrated a normal upper urinary tract. A selective left subclavian arteriogram revealed good filling of that artery and the axillary, brachial, vertebral and internal mammary arteries (Figure 2). These vessels were normal in caliber and course. No aneurysm was seen. In the region of the tumor there was an increased amount of contrast material, and in subsequent films large venous channels were seen draining the vascular neoplasm (Figure 3). Open biopsy of the mass revealed a highly vascular, soft, encapsulated yellow tumor which on microscopic examination was found to be a poorly differentiated malignant neoplasm.

The patient was seen in consultation by the Department of Radiology and was given a 5,000 r. tumor dose over a five-week period. The tumor response was gratifying.

DISCUSSION

Solitary pulsatile bone tumors are rarely seen, and they usually represent metastases from either thyroid or kidney. Large arteriovenous shunts[1] account for the pulsation, and they were demonstrated in this case (Figure 4). The location in this patient led to the initial erroneous impression of aneurysm. No evidence of renal tumor was apparent, and a review of microscopic sections from the left thyroid lobe failed to turn up any indication of neoplasm. Distant bone metastases are frequently the first indication of the presence of a hypernephroma.[2] Cases of hypernephroma have been reported metastatic to sternum,[4, 5] clavicle,[2] femur,[3] skull,[7] spine,[8] and tibia.[6] Pulsating tumors involving other bones have occasionally been described.

Zucker and Levine described such a pulsatile neoplasm in the femur due to metastatic hypernephroma.[3] Sultar and Levine reported a similar case involving the upper tibia.[6]

There is a lack of agreement as to the best course of management in these cases. In any event, treatment is only palliative. Although primary neo-

Dr. Pansegrau was resident in general surgery, and Dr. Lawrence and Dr. Ehrenhaft are an associate professor and a professor, respectively, of thoracic surgery at the U. of I. College of Medicine. Dr. Pansegrau's present address: Marshfield Clinic, Marshfield, Wis.

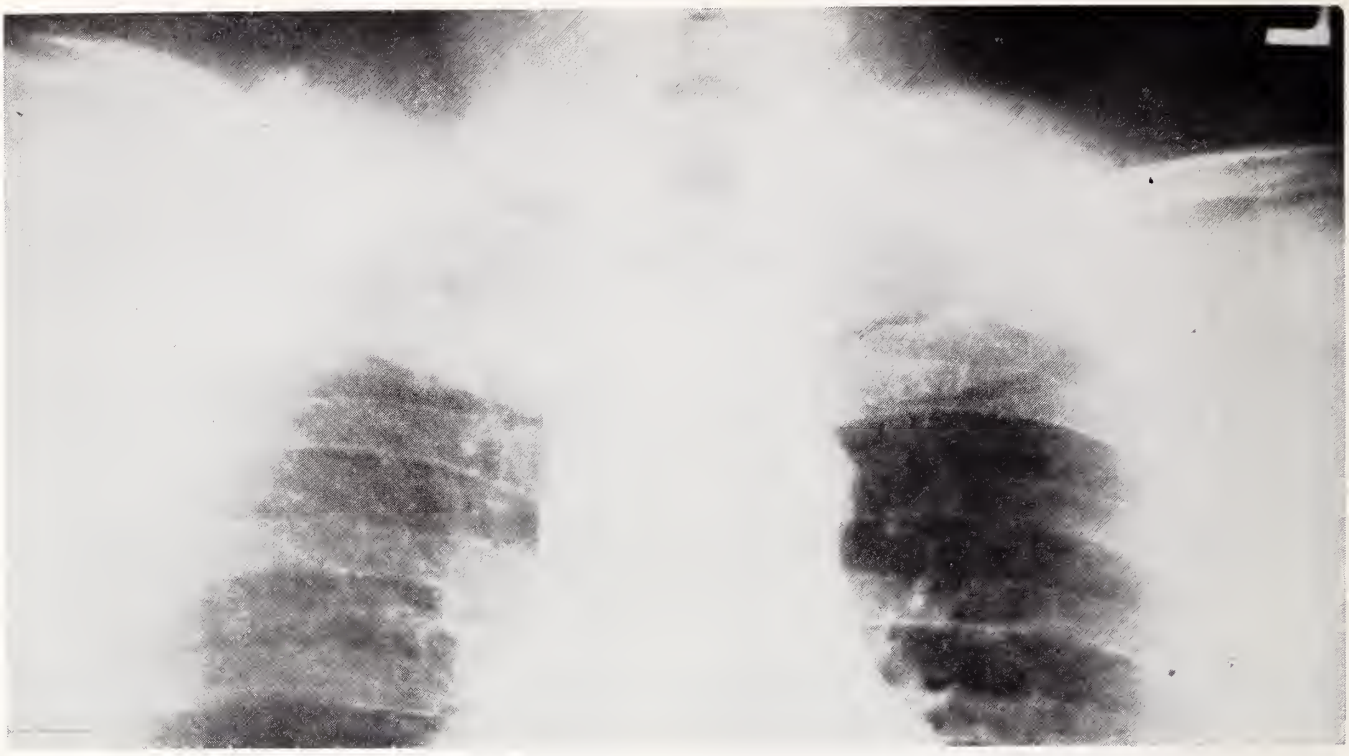

Figure 1. Destruction of the medial third of the clavicle shown in chest roentgenogram.

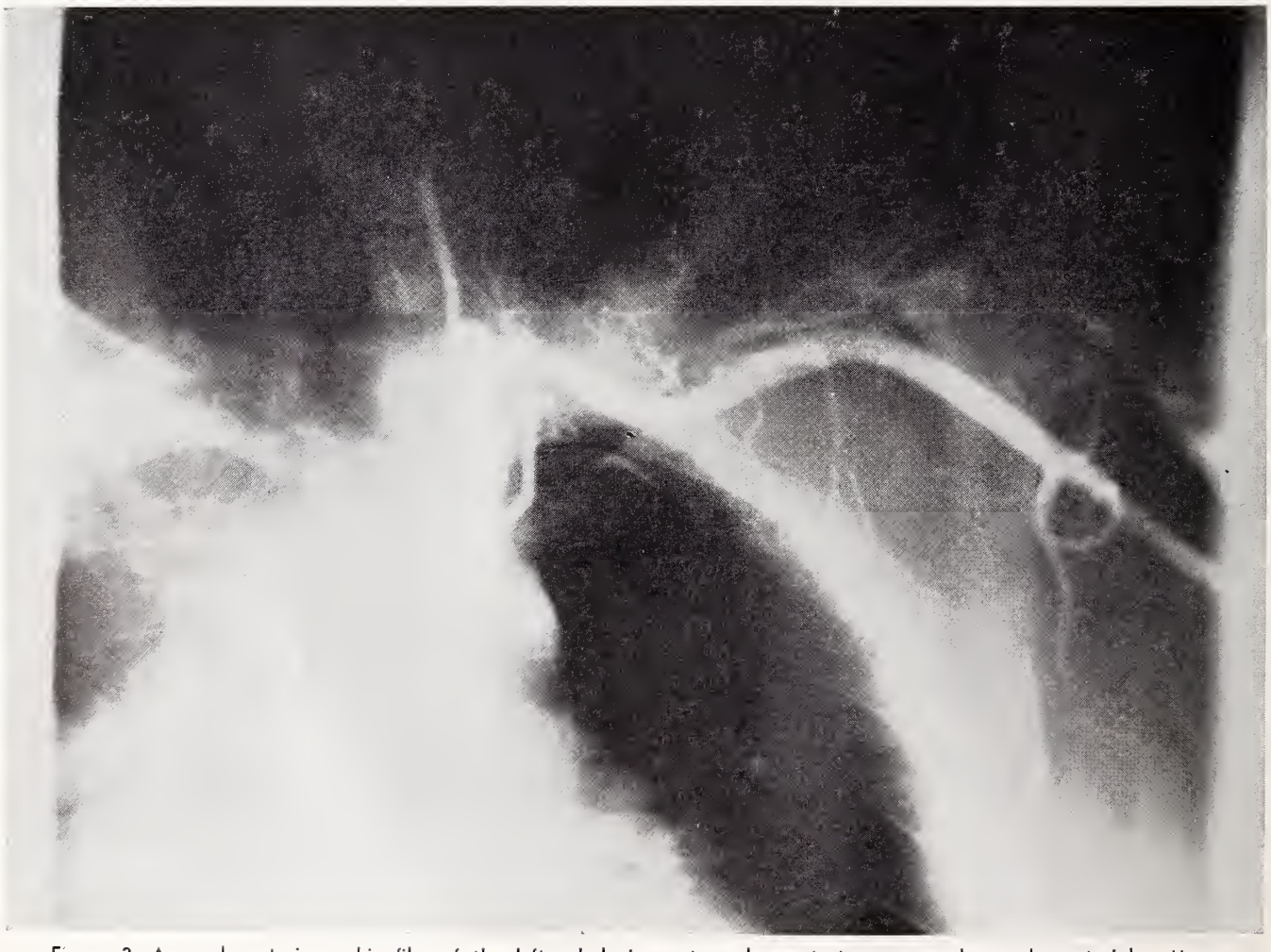

Figure 2. An early arteriographic film of the left subclavian artery demonstrates a normal vascular arterial pattern.

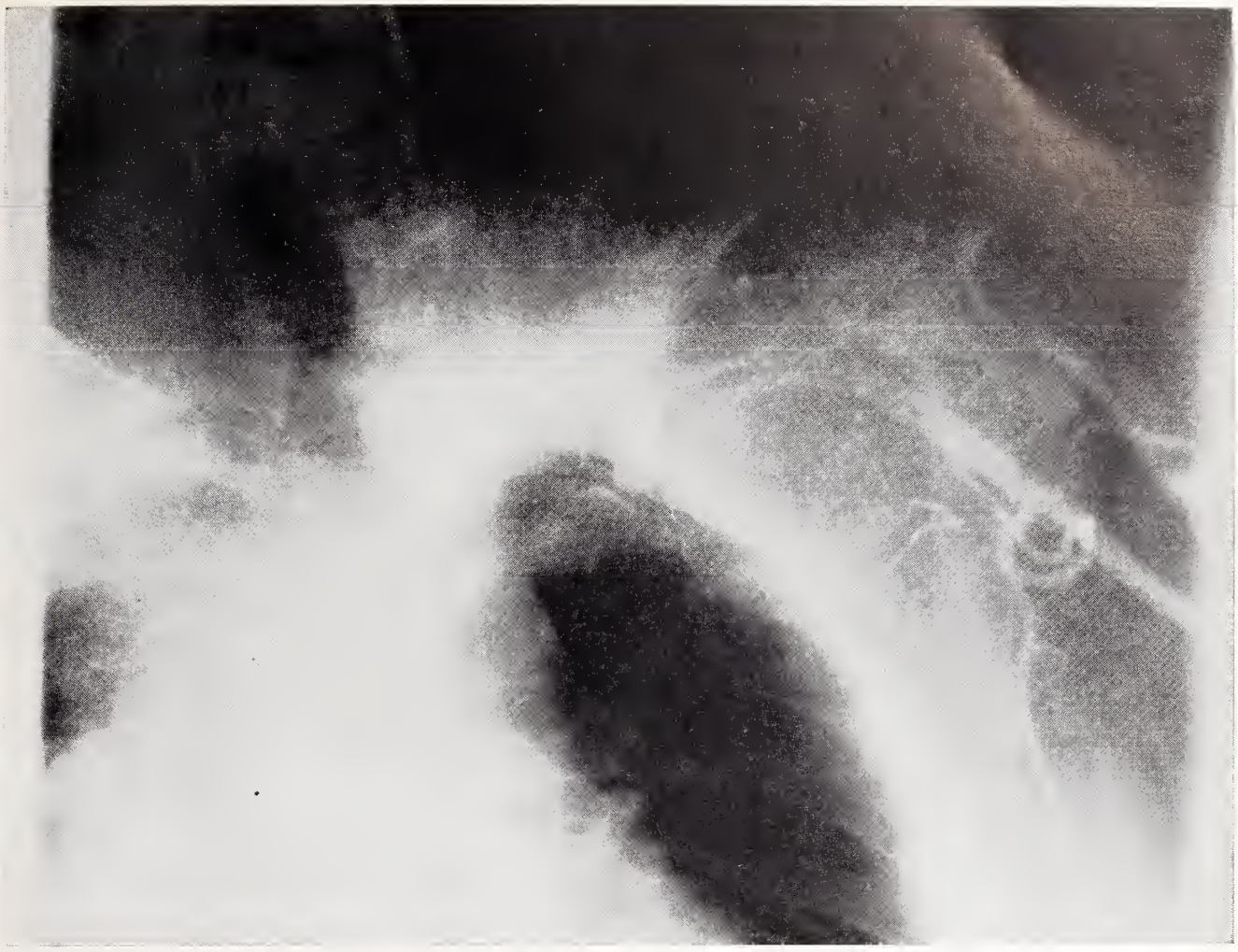

Figure 3. A delayed picture of the arteriographic series reveals many vascular channels and concentration of dye in the region of the neoplasm.

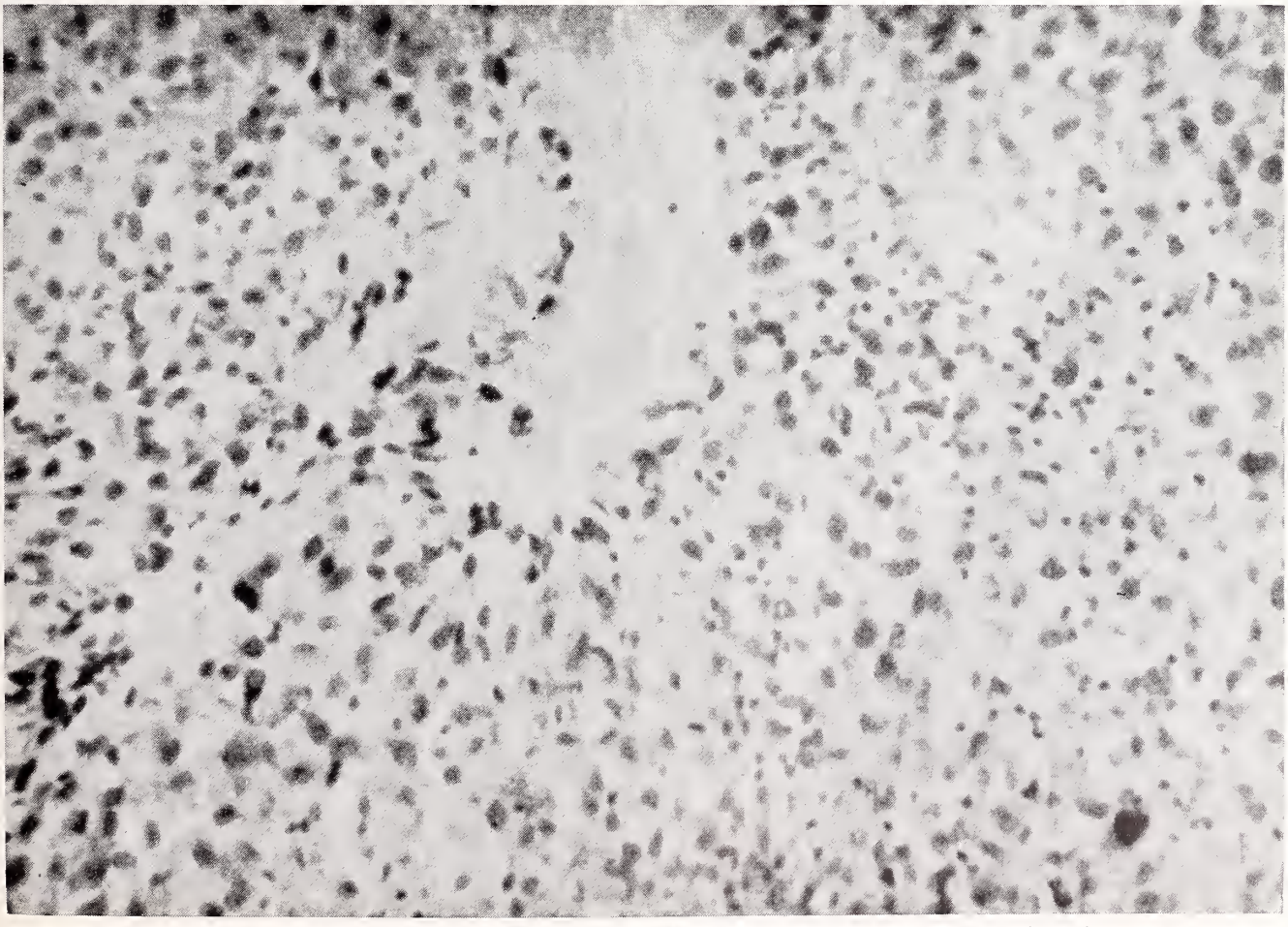

Figure 4. Photomicrograph of the neoplasm demonstrates many large vascular channels.

plasm was not demonstrated in this patient, there seems little doubt that the site of origin was either the kidney or the thyroid.

SUMMARY

A case of pulsatile bone tumor involving the clavicle has been presented. It is of interest because a limited number of these lesions have been described in the literature.

Treatment is palliative, and long-term survivals are rare.

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Obstetrics and Gynecology

The Department of Obstetrics and Gynecology of the U. of I. College of Medicine, in cooperation with the Iowa Obstetrical and Gynecological Society and the Division of Maternal and Child Health of the State Department of Health, will present a postgraduate course in Iowa City on Tuesday and Wednesday, January 18-19. Registration will be $20, and the program is accredited for 12 hours by the American Academy of General Practice.

Tuesday, January 18

9:00 a.m. "Postpartum Pelvic Thrombophlebitis"—L. W. VanVoorhis, M.D., Lincoln, Nebraska

9:20 a.m. "Use of Colposcope as a Diagnostic Procedure"—R. G. Burnett, M.D., resident, U. of I.

9:40 a.m. "Bacteriostatic Effect of Amniotic Fluid"—R. P. Galask, M.D., resident, U. of I.

10:00 a.m. "Postmenopausal Ovarian Function"—H. F. Sandmire, M.D., Green Bay, Wisconsin

10:40 a.m. SYMPOSIUM ON THE ADVANTAGES AND DISADVANTAGES OF GROUP, INSTITUTIONAL AND INDIVIDUAL PRACTICE

Clinic Practice—H. C. Willumsen, M.D., St. Joseph, Missouri, and S. A. O'Brien, M.D., Dubuque

Private Practice—L. H. Luhman, M.D., Iowa City, and Addison W. Brown, M.D., Des Moines

Institutional Practice—J. P. Jacobs, M.D., U. of I., and William B. Goddard, M.D., Denver General Hospital

11:25 a.m. "The Changing Complexion of Cesarean Section in the Past 25 Years"—Cecil W. Seibert, M.D., Waterloo

11:45 a.m. "Long-Term Studies of Progestins"—A. W. Diddle, M.D., Knoxville, Tennessee

12:10 p.m. "Uterine Rupture, A Comparative Study"—J. G. Lee, M.D., Kansas City, Kansas

12:30 p.m. LUNCH

2:00 p.m. "The Management of Vulvar Carcinoma"—J. G. Moore, M.D., Columbia-Presbyterian Hospital, New York City

2:30 p.m. "Primary Ovarian Carcinoma"—W. C. Keettel, M.D.

3:00 p.m. "Carcinoma in Situ of the Endometrium"—C. P. Huber, M.D., Indiana University School of Medicine, Indianapolis

3:45 p.m. "Prevention and Management of Endometrial Vault Recurrence"—W. R. Anderson, M.D.

4:15 p.m. "Recurrent Cervical Carcinoma—Radiation vs. Radical Surgery"—L. J. Dunn, M.D., and H. B. Latourette, M.D.

4:45 p.m. DISCUSSION

7:00 p.m. SOCIAL HOUR AND DINNER—University Athletic Club

Wednesday, January 19

9:00 a.m. "Fetal Distress"—C. Lee Buxton, M.D., Yale University School of Medicine, New Haven

9:30 a.m. "Clinical Experience With Premature Separation of the Placenta"—Dr. Huber

10:00 a.m. "Clinical Parameters of Fetal Distress"—Dr. Moore

10:45 a.m. "Toxemia of Pregnancy"—C. P. Goplerud, M.D.

11:15 a.m. "Rubella Syndrome"—C. A. White, M.D.
"Laboratory Diagnosis"—A. P. McKee, M.D.

12:15 p.m. LUNCH

1:45 p.m. "The Ovarian-Pituitary Relationship"—J. T. Bradbury, M.D.

2:00 p.m. "Stimulation of Ovulation"—Dr. Buxton

2:30 p.m. "Physician Responsibility in Population Growth"—L. R. Hughes, M.D.

3:00 p.m. "Which Oral Contraceptive Should I Use?"—M. E. Yannone, M.D.

3:45 p.m. "Experience With Intrauterine Devices"—Dr. Moore

4:15 p.m. PANEL DISCUSSION: THERAPEUTIC ABORTIONS—Drs. Kretzschmar, Buxton, Huber, Moore and Norris, and S. M. Fahr, LL.B., of the U. of I. College of Law

Toxic Effects From the Use of Agricultural Chemicals

A Review With Special Attention to Problems in Iowa Agriculture

OSCAR C. BEASLEY, M.D., and
KEITH R. LONG, Ph.D.

Iowa City

A NEW FIELD IN MEDICINE is appearing because of the universal utilization of toxic chemicals in the growth, preservation, and preparation of human food. This field deserves and is receiving study by members of many disciplines, including the economist, the entomologist, the botanist, the agronomist, the geneticist, the industrial hygienist, the toxicologist, members of government, and the practicing physician. Laymen in all walks of life have become excited about the possible ultimate effects of these materials on "nature," in large part because of Rachel Carson's book entitled, SILENT SPRING.[1]

Belatedly, doctors of medicine as a group are becoming aware of the human illnesses that agricultural chemicals can produce. It seems that in many hazardous industries the interest and help of the medical profession have arrived late in the day, and only after extensive evidence of human disease has been compiled. Thus it was in mining industries, where workers were endangered by silicosis and tuberculosis in the 1920's; in industries that used radioactive materials before protective devices and methods came into general use; and in the beryllium industry before protection was defined and effected for the workers. In all these instances and in agricultural-chemical toxicity, a large body of basic knowledge existed many years before it was applied by industry and by practitioners of medicine.

From the standpoint of the practicing physician and the industrial hygienist, the psychologic ill-effects of agricultural chemicals on workers must be considered. The newspapers are replete with articles, often prominent editorials, on the ill-effects of chemicals on "nature." They are also replete with hints and discussions of frank human poisoning with agricultural chemicals. One editorial in the DES MOINES REGISTER advised the farmers in Iowa who must fend off a new variety of corn-root infestation with a recommended new chemical to notify their doctors in advance about their likelihood of exposure.

Additional examples of public concern are evident in government circles. For example, the President's Science Advisory Committee met in the spring of 1963 and compiled a report entitled "The Use of Pesticides,"[2] which was then published and released to the general public. In the winter of 1963-64, a Congressional bill to allocate funds for an investigation of the hazards of agricultural chemicals attracted wide attention. It is apparent that the public is being aroused over the problem. The medical profession must assert itself and decide the following points:

(1) Is there a significant health problem from the use of agricultural chemicals?

(2) If there is, how can it be prevented?

(3) If poisoning occurs, can victims be treated effectively?

Our knowledge of the toxic effects of agricultural chemicals in human beings is quite limited. It is a purpose of this paper to outline broadly and to comment upon the toxicity of those agricultural chemicals that are in popular use in Iowa.

Although the number of individual pesticidal agents which organic chemists may contrive is almost infinite, it is fortunate for the student of this subject that the many compounds fall into a few broad classes, each of which has more or less specific biologic effects. For a pesticide to work at practicable dosage levels, it must disrupt or alter some vital process of the plant or animal organism. Presently-useful poisons block the cell's transformation of energy by interfering with the enzymes of energy transfer, interrupting communications between cells (e.g., nervous system), blocking transport of vital material across cell membranes, preventing synthesis of cellular constituents for growth or reproduction, and impeding

Dr. Beasley is a private practitioner of medicine in Iowa City, and Dr. Long is a staff member in the Institute of Agricultural Medicine at the University of Iowa.

vital bio-physical phenomena involved in locomotion or in circulation of body fluids.[3]

Obviously, man has no immunity to these cellular poisons, and hence his safety must depend on the physical separation of these substances from his body's internal environment. Many of the newer pesticides are rapidly absorbed through human skin; others are not. An intelligent avoidance of exposure requires first a knowledge of the relative toxicity of the various compounds, and then the implementation of physical devices that will enable him to handle these chemicals without absorbing harmful quantities.

This year, farmers will be using not only the usual organophosphorus and chlorinated hydrocarbon pesticides but also some combinations of them.

Organic phosphorus compounds in use will be:

Product	*Manufacturer*
Diazinon	Geigy Chemical Corporation
Di-Syston	Chemagro Corporation
Niran-10G	Monsanto Company
Thimet	American Cyanamid
Sta-Thion	Woodbury Chemical Company
4072	Shell Chemical Company
P-Ten-G	Ortho Division, California Spray Company

Chlorinated hydrocarbon pesticides in use will be:

Aldrin	Shell Chemical Company
Heptachlor	Velsicol Chemical Corporation
DDT	Geigy Chemical Corporation

Combinations of organophosphorous and chlorinated hydrocarbon compounds will be:

Aldrex (Aldrin-Parathion)	Shell Chemical Company
Hepathion (Heptachlor-Parathion)	Woodbury Chemical Company
Parahep (Parathion-Heptachlor)	Velsicol Chemical Company
AP-10-10-G (Aldrin-Parathion)	Ortho Division, California Spray Company

I. THE ORGANIC PHOSPHORUS INSECTICIDES

All organic phosphorus compounds are derivatives of phosphoric acid and have an identical physiologic action, namely, the inhibition of the enzyme cholinesterase. They therefore permit the accumulation of excessive quantities of acetylcholine. The symptoms and signs of organic phosphorus poisoning are neurologic in origin, thus accounting for the term "nerve gas"[4] that was applied to the organic phosphorus war gas that was developed but never used in World War II. The whole gamut of cholinergic effects, from the slightest symptoms to coma, are dependent upon the dose. In man, the usual symptoms are headache, lightheadedness, anxiety, blurred vision, weakness, nausea, cramps, diarrhea and tightness in the chest. Signs include sweating, constriction of pupils, weeping, salivation, excessive bronchial secretion, vomiting, cyanosis, papilledema, muscle twitching, convulsions, coma, loss of reflexes, and loss of sphincter control.[5]

In animals experimentally poisoned with the organic phosphate insecticides, various degrees of heart block and cardiac arrest are seen. In suicide cases, death has occurred within five minutes of ingestion.[5]

These insecticides are absorbed by three routes: skin, respiratory tract, and gastrointestinal tract. Skin absorption is enhanced by warm temperature and by the presence of dermatitis. Therefore, a dose so small as to be inocuous for intact skin may produce frank poisoning when significant skin abrasions exist.[5]

The cholinesterase of various tissues and blood can be quantitatively measured.[6] The degree of illness produced by organic phosphorus poisons correlates only grossly with the degree of cholinesterase reduction. Although these poisons act more or less as irreversible inhibitors of acetylcholine, the organism is able to replenish the enzyme continuously. Therefore rapid absorption is usually much more detrimental than slower absorption of an identical quantity. Also, a given degree of depression of the blood cholinesterase level may be associated with mild to severe chemical poisoning, depending upon the rapidity of absorption. Thus, a subject may show marked depletion of blood cholinesterase in cases of repeated exposure to small doses, and yet not appear ill. Critical poisoning usually does not occur in the absence of a marked reduction of the enzyme level. Once poisoned, however, the patient may take as long as three months to regain his normal enzyme level. Therefore in an agricultural worker, re-exposure to the poison after clinical recovery but before laboratory recovery holds the danger that an additional dose that would be clinically harmless in an undepleted subject may reduce his enzymes to a critical level.[5]

The organic phosphorus insecticides vary in their rates of absorption, in their potency, in their physical properties, and in their biochemical action. Some are direct inhibitors of cholinesterase but others first undergo a chemical alteration in the body, and are therefore called indirect inhibitors.[5]

The poisoned subject may show leukocytosis, albuminuria, glycosuria, and hemoconcentration. By a special technic, the cholinesterase activity of the blood, plasma and solid tissue can be determined. A value of less than 0.5^{Δ} pH/hr. is believed to be significant, although in workers who have been chronically exposed, levels of 0.2^{Δ} pH/hr. or less may be noted without evidence of illness.[5]

The end products of organic phosphorus absorption can be estimated in the urine. Paranitrophenol has been used as an index of the amount of para-

thion absorbed. Other end products have also been measured.[5]

There are no gross or microscopic changes in the tissues of animals that have been poisoned with the organophosphates. Effective treatment of victims is available, but because there are no definitive pathognomonic findings, three considerations in differential diagnosis deserve special emphasis: (1) In the absence of an immediate laboratory determination of cholinesterase, various unrelated conditions including cerebral hemorrhage, heat stroke, hypoglycemia, gastroenteritis and pneumonia have been confused with poisoning. (2) In the presence of mild (and perhaps asymptomatic) poisoning, asthenia and various psychogenically induced reactions such as hysteria are likely, especially in the co-workers of poisoning victims. (3) Men exposed to some of the less toxic organic phosphorus insecticides may actually exhibit symptoms resulting from unrecognized exposure to more toxic insecticides such as mercurial or arsenical agents.[5]

In the great majority of cases treatment of organic phosphorus poisoning can be successful if certain principles are kept in mind. The illness is a physiologic disturbance resulting from a reversible enzyme depletion, and no structural damage occurs except by way of complication. The pharmacologic derangements are directly counteracted by atropine and other newer pharmacologic agents.[5, 7, 8] If the vegetative functions—specifically respiration and tracheobronchial toilet—can be maintained artificially until the critical enzymatic depletion has been sufficiently overcome, recovery is usually assured.

Artificial respiration should be the first step in severe cases. Then large doses of atropine (two to four milligrams) should be given intravenously, followed by 2-PAM (2-pyridine aldoxime methylchloride and 2-pyridine aldoxime methyliodide). Decontamination of the skin, stomach and eyes should follow.

Although this summary is not intended to be complete, several points in treatment merit additional emphasis: (1) Organophosphorous insecticides are usually much more soluble in alcohol than in water. Hence, cleaning contaminated skin with ethyl alcohol is worthwhile. (2) Sedatives, tranquilizers and narcotics are contraindicated. (3) Any victim who is sick enough to need one dose of atropine merits at least 24 hours of close medical observation because of the possibility of progression to a more serious state of toxicity.

II. THE CHLORINATED HYDROCARBON INSECTICIDES

DDT is the best known of the chlorinated hydrocarbon group of insecticides. They have two features in common, namely (1) the chemical composition implied by their name and (2) a principal effect on the human central nervous system. The chemical structures of these compounds vary widely, and there are definite quantitative and qualitative differences in their effects. At least to some extent, they are all absorbed via the respiratory and gastrointestinal tracts, and the skin. In man and higher animals, skin absorption is minimal for some of these compounds including Dilan and DDT in powder form. Others such as Dieldrin and Heptachlor are rapidly absorbed through the skin, even when the chemical is in the dry form.[3, 5]

Pathologic studies of the tissues of poisoned subjects usually reveal no structural abnormality. In the case of chronically poisoned animals, microscopic changes in the liver and kidney may be seen.[5] The intracellular biochemical reaction produced by the chlorinated hydrocarbon insecticides has not as yet been elucidated. However, accruing evidence suggests that these compounds interfere with the enzyme system which generates high-energy phosphate compounds.[9]

The symptoms and signs produced by these compounds are varied, but serious poisoning always culminates in generalized convulsions. In DDT poisoning the characteristic early symptoms are paresthesias around the mouth and in the extremities, malaise, headache and fatigue. Ataxia, confusion and tremor are noted. Except in the more severe cases, recovery is well underway within 24 hours. Therefore in patients who do not start recovering promptly, a misdiagnosis must be considered.

The chlorinated-hydrocarbon insecticides, being central-nervous-system affectants, produce specific electroencephalographic abnormalities, namely bilateral synchronous spikes, spike-and-wave complexes, and slow theta waves. These changes may be evident in subclinically-poisoned subjects. These compounds and some of their degradation products are stored in the fat, where they can be measured on biopsy or at autopsy. This storage apparently sequesters the material and renders it more or less harmless, since the total amount that is found stored in a chronically poisoned animal may be greater than the amount that would be lethal when administered in a single dose. These insecticides, with their degradation products, are excreted in the urine. It is practical to examine urine for these products in cases of suspected poisoning.[5] There are no practical laboratory tests for diagnosis.

The treatment of chlorinated-hydrocarbon insecticide poisoning is limited to the control of the convulsions. Barbiturates are preferred, but calcium gluconate has been effective in experimental animals. Barbiturates and calcium gluconate may be used concurrently because the mechanics of their action are different.

SUMMARY

The toxicology of two frequently used classes of agricultural poisons has been reviewed. Attention

is called to the fact that regardless of long-term broad biologic considerations, the use of these substances is permanently entrenched in and economically essential to modern agriculture. The important place of agricultural poisons in the spectrum of human disease is a neglected area in the physician's training. Because of the psychologic manifestations which may occur in patients who think that they have been poisoned, it is just as important for physicians to know what effects these materials do *not* produce as to recognize those which they do cause.

There is much to be learned, especially in the area of accumulated effects and acute subclinical effects. At present, it appears that with proper precautions man is well able to utilize the new scientific advances in agricultural chemicals, and to reap the greater food abundance resulting therefrom without suffering significant detriment.

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CLINICAL SUMMARY

A WHITE MALE INFANT, 19 days old, was admitted to the University Hospitals for evaluation and further treatment of diarrhea of six days' duration and "possible brain damage" manifested by unresponsiveness for five days.

The baby had been born at the University Hospitals following an uncomplicated 41-week pregnancy and normal spontaneous vaginal delivery. His birth weight had been 3,050 Gm. and his length had been 49.0 cm. The physical findings during the neonatal period had been normal. The baby had gone home with his mother on the fourth postpartum day, when he weighed 3,020 Gm. and was taking 70-100 ml. of formula per feeding. At home, the infant had thrived until six days prior to his return to the University Hospitals. That day, he had passed 14 explosive, watery-green stools. No blood or mucus was seen in these stools. Despite symptomatic therapy at home under the direction of the family's physician, the diarrhea had continued, and vomiting of all ingested fluids had become an additional problem.

After three days he had been admitted to the local hospital when his physician found him to be "extremely dehydrated" and poorly responsive to external stimuli. Via a cannula inserted into the left saphenous vein, he had then received 100 ml. of whole blood, 200 ml. of lactated Ringer's solution, and 150 ml. of 5 per cent dextrose in water. This therapy had improved his state of hydration, but had left him unresponsive. Brain damage secondary to the acute dehydration was suspected, and the child was transferred to University Hospitals.

At the time of admission, a polyethylene catheter in the left saphenous vein was connected to a bottle containing approximately 500 ml. of lactated Ringer's solution. No definite estimate could be obtained of the volume of fluid which had been given intravenously during the previous 24 hours. The infant was lethargic and poorly responsive to painful stimuli, but was able to move all extremities slowly. His body temperature was 100.4°F. rectally, his pulse rate was 130/min., and his respiratory rate was 60/min. His tongue was dry, and the skin over his anterior abdominal wall had poor turgor, but he voided during the initial examination. His weight was 2,980 Gm. No rash was noted. The anterior fontanel was full but not tense. The tympanic membranes appeared normal. The conjunctivae

and sclerae were dry, and both eyes exhibited intermittent lateral nystagmoid movements. The pharynx appeared normal. There was no resistance to passive flexion of the neck. Slight intercostal inspiratory retractions were apparent, and fine to medium rales were audible throughout all lung fields. Cardiac findings were interpreted as normal. Abdominal examination revealed no visceromegaly. The remainder of the physical examination revealed normal and non-contributory findings.

On the day of entrance, urinalysis revealed a pH of 5.0, a specific gravity of 1.015, a trace of albumin, no sugar, and an unremarkable sediment. The blood hemoglobin concentration was 16.5 Gm. per cent, and the hematocrit was 51 per cent. The total white blood cell count was 15,400/cu. mm., and the peripheral differential blood smear included 16 per cent bands, 61 per cent mature neutrophils, 21 per cent lymphocytes, and 1 per cent monocytes. A lumbar puncture yielded grossly bloody cerebrospinal fluid under an initial pressure of more than 270 mm. H_2O. The bloody color persisted throughout collection of 10 ml. of fluid in four tubes, and when centrifuged the fluid retained a xanthochromic appearance. This fluid yielded a 2+ Pandy reaction, contained 660 mg. of protein and 30 mg. of sugar per 100 ml., and revealed many red blood cells but no white blood cells. It subsequently yielded no growth on routine bacteriologic culture. Bilateral subdural taps failed to yield bloody or xanthochromic fluid. Roentgenograms of the chest were interpreted as showing almost complete consolidation of the right upper and middle lobes, as well as of portions of the left upper and lower lobes. Roentgenograms of the skull were interpreted as showing no evidence of increased intracranial pressure, fracture, or intracranial calcification.

After blood had been obtained for biochemical determination of the baby's electrolyte status, parenteral fluid therapy was continued, with a solution containing 30 mEq. of sodium, 45 mEq. of chloride, 15 mEq. of potassium, and 2.0 Gm. of calcium gluconate per liter in 5 per cent dextrose in water. Between 300 and 450 ml. of this solution were given during each 24-hour period during the next four days of hospitalization. His body weight rose slowly to 3,100 Gm. on the fifth day. His output of urine was satisfactory, but he continued to pass 7 to 8 small, soft, green stools each day. Following is a tabulation of biochemical data:

Hospital Day	BUN (mg.%)	Serum CO_2 (mEq./L)	Serum Na (mEq./L)	Serum K (mEq./L)	Serum Cl (mEq./L)
1 (Day of of adm.)	38	9.8	178	3.7	138
2	30	13.7	152	3.8	127
3	24	13.6	148	4.0	118
4	20	12.4	133	3.7	110

At the time of admission, a throat swab, a rectal swab, and a blood sample were obtained for bacterial culture. Subsequently, the throat swab yielded a "pure culture" of an organism identified as belonging to the Klebsiella-Aerobacter group. By *in vitro* methods, this organism was found to be sensitive to tetracycline and colistimethate sodium (Colymycin), but resistant to chloramphenicol and streptomycin. Culture of the blood specimen yielded no bacterial growth, and culture of the rectal swab yielded no recognized enteric pathogens. After these initial specimens had been obtained for bacteriologic study, penicillin, sulfadiazine, and chloramphenicol were administered in dosages appropriate to the infant's body weight. Tetracycline was added to this regimen when the results of the throat culture became known.

The infant was cared for in an isolette providing 40 per cent oxygen and 50 per cent humidity. At all times from admission until his death, his rectal temperature was 98° F. or less, ranging at times down to 94° F. Clonic movements of both arms were controlled by paraldehyde in 0.3 ml. doses, intramuscularly, on the second and third hospital days. Paralysis of both sixth cranial nerves was first noted on the third day. Beginning on the third day, attempts were made to feed the baby orally, but he was never able to suck and swallow normally. He became progressively more lethargic and less responsive to stimulation. His respiratory movements were rapid and shallow. On the fifth day of hospitalization, numerous ecchymotic areas appeared on his left leg, and the extremity became edematous. On the sixth day, his extremities were rigid and had a dusky color, and his respiratory movements became shallow and irregular. He died quietly, early on the morning of the seventh day of hospitalization.

CLINICAL DISCUSSION

Dr. F. W. Stamler, Pathology: Mr. Allan Hassan will open the discussion today for the students.

Mr. A. Hassan, junior ward clerk: We are presented with a case of sudden onset of explosive diarrhea and vomiting, with subsequent severe dehydration. The picture is further complicated by pneumonia, and unresponsiveness and other CNS symptomatology. In addition, there is significant evidence of other inflammatory pathology.

Before proceeding further, we think it would be helpful in establishing the proper diagnosis if the following points were clarified. (1) What degree of sanitation was employed in the infant's feeding? (2) When the child was seen by his family physician, what did the throat look like? What did the tympanic membranes look like? What did the lungs sound like, and what was the character of his respirations? (3) What symptomatic treatment was administered at home? (4) As regards the lumbar puncture, how marked was the xanthochromia? Was it more intense than the xantho-

chromia that is seen normally in the spinal fluid of some young infants, and were the red cells crenated? (5) Were cultures ever done on the diarrheal stools?

On the basis of the information given in the protocol, we feel that the two most likely possibilities which might explain the initiation of this child's problem are: (1) sepsis of the newborn, with the probable site of entrance the respiratory tract, and with subsequent vomiting and diarrhea; and (2) an isolated instance of epidemic diarrhea of the newborn, with pneumonia as a secondary complication. Both of these entities are distinguished by a lack of passive immunity transferred from the mother to the infant against the organisms usually responsible, such as the coliform bacteria.

Of these two entities we feel that sepsis of the newborn is the more likely. One major reason is that although epidemic diarrhea has been known to occur in an isolated instance, as would be the case here, it is most generally seen as a problem involving many infants in hospital nurseries.

In either case, central nervous system involvement is not an unusual complication. On the basis of the increased intracranial pressure, as evidenced by lateral nystagmoid eye movements and later by bilateral cranial-nerve paralysis, and on the basis of the xanthochromic spinal fluid plus, the primary condition with which we think we are dealing, the two most plausible complications are: (1) sinus venous thrombosis, probably located in the great vein of Galen and secondary either to bacteremia or to anoxia and dehydration, or (2) a brain abscess, possibly complicated by some degree of brain infarction. Subarachnoid hemorrhage was ruled out on the basis of the absence of cervical rigidity.

In addition, we postulate that the edema and ecchymoses of the left leg were due to a venous thrombosis in that leg, possibly secondary to the IV catheterization and fluid infusions given in that area.

In conclusion, we should like to raise certain questions regarding the therapy in this case which we hope may be answered in the discussion to follow. First, in the initial therapy in the local hospital, was the vascular fluid volume properly reconstituted before whole blood was administered? And was administration of whole blood indicated in this case? Second, is it possible that overhydration was a predisposing factor in this child's pneumonia?

Dr. Stamler: A number of questions have been posed concerning the data given in the protocol, and I wonder whether we can't answer some of them now. Do you have the requisite information, Dr. Gauchat?

Dr. R. D. Gauchat, Pediatrics: We have no information as to the hygienic methods used by the infant's mother, although we can tell you that she cared for four other children with no similar problems. We can tell you that the symptomatic therapy used at home prior to the infant's admission to the local hospital involved removal of carbohydrate from the formula as prepared by the mother —removal of Karo from an evaporated milk-water formula. We do not have information from the family physician as to his findings in the nose, throat, or other systems at the time of the baby's admission to the local hospital. We know no more than is stated in the protocol about his evidence of the baby's state of hydration prior to the inauguration of therapy with Ringer's lactate solution and with whole blood. We have information that the spinal fluid was "loaded with red cells," and contained no white blood cells. The xanthochromia was not quantitated. The spinal fluid, the record shows, continued to be red throughout the entire collection of the specimen. We do not know how crenated the red cells were. The stool was cultured for pathogens and yielded no significant growth of Staphylococcus, Shigella or Salmonella organisms, according to our laboratory.

Were there other questions that I have missed?

Mr. Hassan: We were wondering about the therapy—the giving of blood. Was it given initially, or was it given after the fluid volume had been reconstituted?

Dr. Gauchat: As reported in the record, the baby's initial parenteral fluid therapy was Ringer's lactate solution. Blood was given subsequently.

Dr. Stamler: Thank you, Dr. Gauchat. We are somewhat handicapped in our discussion of this case because several of the people involved in the care of this infant are no longer available for consultation. Thus, in most instances, the answers to the questions that come up will be based upon information obtained from the hospital record and the necropsy protocol.

Dr. Taylor will now discuss this case.

Dr. J. C. Taylor, Pediatrics: This child represents one of the most severe problems in fluid and electrolyte management seen in pediatrics, and later I shall spend a little time discussing the problem of hyper-electrolytemia.

Acute diarrhea is a very common disorder in children. In a study of admissions to Children's Hospital, Cincinnati, about 44 per cent of the cases of diarrhea in children under one year of age were shown to have been of viral etiology, 27 per cent were of bacterial etiology, and 15 per cent were of combined bacterial and viral etiology. The remaining 14 per cent were so-called "secondary" or parenteral diarrhea. In parenteral diarrhea, the primary source of infection is somewhere other than in the gastrointestinal tract, e.g. an otitis, a pharyngitis, or a GU infection. The younger the child, the more severe is the diarrhea, and it is especially marked where the offending organism is a gram-negative bacterium, since the endotoxin produces a severe irritation of the intestinal tract.

Although Klebsiella has been reported to cause

epidemic diarrhea in the newborn, it was not isolated from the stool in the present case. Therefore, I agree that this was not primarily an epidemic Klebsiella diarrhea. It would seem probable, however, that there was either sepsis or a primary respiratory-tract infection with the Klebsiella organism. As you know, during pregnancy the smaller 7S globulins, which compose about 90 per cent of the adult immunoglobulins, pass the placenta and give the newborn child an extraordinary protection against a wide range of diseases—measles and polio, to name two. However, the larger 19S macroglobulins do not pass the placenta, and since these are composed of the antisomatic O globulins of the gram-negative bacilli, newborns are especially susceptible to gram-negative infections. Therefore, the most common offending organisms in neonatal sepsis are such gram-negative bacilli as E. coli, Pseudomonas, and Klebsiella. In the present case it is very difficult to say whether there was a primary septicemia, with seeding of the lungs, or whether the pneumonia developed without a preceding sepsis. Klebsiella occurs in the upper respiratory tracts of an estimated 1 to 5 per cent of all adults, and therefore a child who has no innate protection against the organism is very likely to develop an infection. We can therefore postulate that the patient developed Klebsiella either primarily or secondary to sepsis, and that the diarrhea which caused most of the difficulty was a consequence.

I wonder whether we might see the roentgenograms of the chest.

Dr. J. T. Keller, Radiology: As you can see, in the right upper lobe there was a large, dense infiltrate, and in the lower lobe just above the diaphragm on the left side was another infiltrate. The condition apparently was just a typical lobar pneumonia. The rest of the lung parenchyma was clear.

Dr. Taylor: When the child was admitted to the pediatric ward, approximately six days after the onset of the illness, prompt therapy for his pneumonia was begun. I might say a few words in passing about the therapy which was given. You will note from the protocol that the child was started on penicillin, chloramphenicol, and sulfadiazine. Those constitute the so-called "triple therapy" of pediatrics. Those three drugs in combination are generally used in the treatment of bacterial meningitis and other severe infections until such time as the offending organism has been identified. In this situation the triple therapy was started, but it was modified when the culture and sensitivities were known.

Be that as it may, one of the two major problems which this child presented was fluid and electrolyte imbalance. It has been estimated that approximately one-third of all children who require hospitalization as a result of electrolyte imbalance and diarrhea present with hyper-electrolytemia. It is extremely difficult to diagnose hypernatremia on physical examination. The textbooks state that the child with hyper-electrolytemia is not quite as dry as the child with hypo-electrolytemia. In hyper-electrolytemia the skin is said to have a peculiar doughy feeling, in contrast to the dry-feeling of the skin of a child who has hypotonic dehydration. These differentiations hold in the severe cases, but do not hold all of the time, and the only way to diagnose a hypertonic state correctly is to obtain serum electrolytes.

The development of hyper-electrolytemia presupposes a water deficit without a concomitant loss of electrolytes. It can occur under a variety of circumstances. First and most commonly, there is an excessive loss of hypotonic body fluids. In children, quite obviously, the principal cause of a dramatic loss is diarrhea. It can occur both in children and in adults with diabetes insipidus of either pituitary or primary renal etiology. It can occur in hyperthermia, with excessive sweating, where the electrolyte loss is lower than the water loss. A second cause can be a poor water intake. The pre-verbal child who cannot indicate thirst is likely to develop a hyper-electrolytemic dehydration. An altered state of consciousness where normal mechanisms of thirst are not intact would also lead to a specific water deficit exceeding the electrolyte deficit.

A third and unfortunately a fairly frequent cause is the administration of excessive electrolyte solutions. For example, it has been a very common practice for many years to treat infantile diarrhea with boiled skimmed milk. Theoretically, by boiling skimmed milk one not only destroys bacteria but also denatures the endogenous protein. However, the nitrogenous protein by-products are still present, and as a result of the kidney's seeking to get rid of these nitrogenous products, the child loses an excess amount of water. Therefore, a state of hypernatremia is produced.

Another common practice in treating diarrhea is to give a solution consisting of a quart of water, half a teaspoonful of salt and a tablespoonful of sugar. This creates about a third-normal saline solution. Mothers who are perfectly capable of reading a cookbook and constructing the most beautiful cake will put in two tablespons of salt and a half-tablespoon of sugar. In other words, instead of being given a third-normal, the child is given almost isotonic saline.

These three causes, then, were all implicated in this case. First there was diarrhea with an abnormal loss of fluid. Second, as we shall see a little bit later, the central nervous system was depressed, with a resultant poor intake of fluid. Although we can't incriminate true diabetes insipidus under these circumstances, the renal tubular function during the first year of life is immature, and therefore the capability of maximum urine concentration is absent.

An interesting sidelight in the hypernatremic child is that the specific gravity is usually below

that which would be anticipated as a result of simple dehydration in a child of comparable age. This is brought out very dramatically, I think, in the present case. Although the child was moderately dehydrated upon admission, his urinary specific gravity was only 1.015. Thus not only do we have tubular immaturity as regards concentrating urine, but we also have some factor in the hypernatremic state which further reduces the ability of the tubules to function adequately.

Finally, in this particular case, we have suggestive evidence that the child was given too much salt. From the protocol it is not clear exactly how much solution was given, but certainly in the three days prior to the child's admission here, he had received more than 350 cc. If we assume that the 350 cc. consisted of 200 cc. of lactated Ringer's and 150 cc. of 5 per cent dextrose in water, the solution must have contained 70 mEq. of sodium per liter, which is approximately half-normal saline. This is far too much salt to give, except in a case of severe hyponatremia.

As to the transfusion, the child weighed approximately 3 Kg., and 100 cc. of whole blood was given him. The average transfusion for children should be about 20 cc./Kg. of body weight, and we should think of 60 cc. as being the maximum. Whether the blood was given all at one time is not clear, but upon admission here the hemoglobin was elevated to 16.5, and we could therefore assume that he had received one-third more blood than had been indicated.

The problems that we face in a child with hypernatremia are (1) to correct the dehydration; and (2) to correct the electrolyte imbalance. One can estimate the water loss by assuming that in a severe dehydration there is a 15 per cent reduction in weight; in a moderate dehydration about 10 per cent; and in a mild dehydration, about 5 per cent. So in this severely dehydrated child we should estimate the water loss as being about 15 per cent of the body weight, or 450 cc. This should be replaced gradually over a 48-72 hour period. Although it would seem proper for water alone to be administered in a hypernatremic state, it is important to remember that there is hyperosmolarity of the intracellular compartment, and that free water moves rapidly into the cell, producing an immediate and severe water intoxication.

The problem we have in treating children with hyper-electrolytemia, therefore, is to give enough salt to prevent water intoxication, and yet to hold the salt to a low enough level so that it won't enhance the hypernatremia. In my experience, the children who get too much water convulse, and those given too much salt convulse. This is really one of the most difficult problems in electrolyte management that we see in the pediatric age group. Hence, the first component of the solution that we give must be sodium. Darrow has suggested 5 parts of 5 per cent dextrose in water, 2 parts of 0.9 per cent sodium chloride, and one part 1/6-Molar lactate, and I think his is a good formula to follow. Therefore, if one decides to give 480 cc. of fluid in 24 hours, the composition of the fluid should be 300 cc. 5 per cent dextrose in water, 120 cc. normal saline, and 60 cc. M/6 lactate.

Balance studies on children with hypo-electrolytemia have shown that there is no potassium deficit. However, when renal function has been established, we commonly give a maintenance dose of potassium, i.e., 2 mEq/Kg. daily.

There is a third essential component of the intravenous solution. One of the most interesting features of the hypernatremic state is calcium. When the association between a low calcium and hypernatremia was first noticed, in the late 1940's, it was felt that the hypocalcemia was a consequence of rehydration. However, it has been conclusively shown that the hypocalcemia is present when the child is first seen and before any corrective solution has been given. Studies in rats have indicated that the low calcium is not related to phosphate excretion, since it is found to be independent of hyperphosphatemia. Finberg, at Johns Hopkins, believes that the excess of sodium in the extracellular fluid in some way upsets the equilibrium between the circulating or extracellular calcium and the calcium in the skeleton. Therefore, when a child is seen with acute hyperelectrolytemia, one adds calcium, usually in the form of calcium gluconate, to the IV. From the chart of electrolytes, it seems that appropriate fluid and electrolyte solutions were used in this case.

Finally we come to the neurologic catastrophe which occurred and which I think was responsible for the patient's death. Almost all children with hypernatremia have some central nervous system depression. This varies from lethargy to coma, and it has been estimated that as high as 20-30 per cent of patients have convulsions before the initiation of therapy.

Finberg devoted extensive study to the anatomic and biological changes which occurred in the central nervous system of 6- to 8-week-old kittens that had been given intraperitoneal hypertonic solutions. He found an extraordinary increase in the osmolarity of the intracellular compartment of the neural tissue. There was some increase in the intracellular osmolarity of control muscle cells, but it was not so marked as that which occurred in the neural tissues. Part of this increase in osmolarity was unquestionably due to a loss of water from the cell, but that was not the whole explanation. In addition, there probably was movement of sodium into the cell, and also dissociation of the complex molecules, such as protein, within the cells which add ionic support to the hyperosmolarity. Finberg concluded that the neurologic symptoms which develop in hypo-electrolytemia are due to one or a combination of three factors: (1) There is disruption of cellular metabolism due to hyperosmolarity. (2) Changes in the concentration of ions of the extracellular compartment exercise an influence upon the cells. For example, the high concentration

of sodium chloride and the low concentration of calcium definitely have some effect on neural physiology. (3) On a purely mechanical basis, there is shrinkage of the brain tissue as a result of intracellular dehydration, with a tearing of the bridging veins and hence subdural hematomata and subarachnoid hemorrhages. Finberg observed such hemorrhagic phenomena in kittens, and the intracranial hemorrhage and the severe neurologic damage that occurred in the infant whom we are discussing could be explained simply on the basis of hypernatremia.

A second explanation might be a dural-sinus thrombosis. Certainly this occurs not infrequently in severe dehydration. The bloody spinal fluid, the sixth-nerve paralysis, and the increased intracranial pressure would all be compatible with a venous thrombosis, either of the vein of Galen or of the lateral sinus. There is always a remote possibility that a focus of infection was established in the middle ear following an initial sepsis, with later extensions into a lateral sinus.

In summary, I feel that we had a perfectly normal neonate who developed either a Klebsiella bacteremia or a primary Klebsiella pneumonia, and secondary to this, diarrhea. The resulting severe dehydration and electrolyte disturbance culminated in a central nervous system hemorrhage, due either to a mechanical shrinkage of the brain or to a sinus thrombosis, and in spite of heroic therapy there were progressive neurologic deterioration, hypothermia, convulsions, and gradual respiratory failure. Terminally, the child developed a venous obstruction of the left leg, possibly secondary to phlebitis at the site of the cutdown, which apparently extended into the inferior vena cava and occluded both femoral veins. The patient died seven days after admission and 13 days after the onset of his illness. In conclusion, I give my congratulations to the house staff involved in this case, because the child died in balance.

Dr. Stamler: Are there any questions, or does anyone else care to comment at this point?

Dr. I. Snyder, Microbiology: I should like to comment on the stool culture. The report was negative for Salmonella, Shigella, and hemolytic Staphylococcus aureus. There was no indication of the age of this child on the requisition, and therefore the presence of Escherichia coli and the Klebsiella-Aerobacter group was not reported.

Dr. Gauchat: May I ask at what age you stop looking for these?

Dr. Snyder: Our routine procedure is to type Escherichia coli serologically in all fecal specimens of children under the age of two years. Serologic typing of E. coli for older children is done only on special request.

One of the requisitions was marked simply "stool." I understand it was actually a rectal swab. In my opinion it would have been better to collect some of the diarrheal specimen, rather than to take only a swab. Certainly there were fewer organisms in the colon of this child, and thus it was difficult to isolate bacteria from a small sample.

Dr. Stamler: If you had been told that the patient was an infant with diarrhea, how would you then have modified your approach?

Dr. Snyder: If we had known that the patient was a child under two years of age, we would have reported the presence of E. coli, Klebsiella-Aerobacter group, Pseudomonas, etc. If E. coli were present, we would have sampled and typed five to 10 colonies serologically to determine whether they belonged to one of the entero-pathogenic types.

Dr. Stamler: There is an old Oriental legend which summarizes human existence with the statement, "Man is born, he suffers, and he dies." This case would tend to substantiate that philosophy.

At the time of necropsy on this infant, one of the main findings was a necrotizing cellulitis involving the area of the venous cut-down on the medial aspect of the left ankle. Apparently that procedure was the one which had been done before the child was brought to this hospital.

Associated with that, there was a fulminant necrotizing thrombophlebitis extending upward, involving the saphenous vein, and extending into the iliac veins and the inferior vena cava.

Associated with this were focal cellulitis and gangrene of the lower extremity, with one area in the calf of the leg, another near the medial aspect of the knee, and a rather large one on the medial aspect of the thigh. Also associated with this were innumerable septic emboli to the lungs, and associated with these were areas of necrotizing pneumonia, some very small, others larger.

There was a bilateral otitis media, and there was extensive thrombosis of the dural venous sinuses and cerebral veins. This was accompanied by fairly extensive subarachnoid hemorrhage, and by very extensive intracerebral, intracerebellar and intraventricular hemorrhage, with extensive early encephalomalacia.

Pseudomonas aeruginosa organisms were cultured from the wound of the ankle, from the bloodstream, and from the lung. The lung culture also grew Klebsiella-Aerobacter organisms, and the exudate from the middle ear grew the same organisms—Klebsiella-Aerobacter, but no Pseudomonas aeruginosa.

It is of interest in this respect that the thrombosis of the venous dural sinuses and the cerebral veins, as far as could be determined, was not associated with the necrotizing inflammation of bacterial growth that was present in the vena cava and its tributaries. This finding would seem to support the proposition that the Pseudomonas gained entrance to the ankle wound and spread centrally through the venous system, that the ear infection had a different pathogenesis, and that the pulmonary infection probably represented a combination of them. It is a little difficult to be sure how much of the pulmonary disease was Klebsiella pneumonia and how much was the result of septic

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Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

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SEARLE

Research in the Service of Medicine

emboli infiltrated with Pseudomonas organisms. Since the lungs did not have the mucoid or gelatinous type of exudate that is usually associated with Klebsiella pneumonia, I think it is likely that it was not the major constituent of pneumonia, at least at the time of autopsy. In fact, when I saw the roentgenogram, I wondered whether the pneumonia had not been altered considerably by the antibiotic therapy, because at autopsy the lungs did not exhibit any massive consolidation, but rather, a very widespread multifocal involvement.

A section of the skin of the involved extremity showed the epidermis separated by vesicle formation from the underlying dermis. There was diffuse necrotizing cellulitis of skin and subartis, with conspicuous involvement of blood vessels. Many vessels were filled with a peculiar type of basophilic necrotic material containing many bacteria, with necrotizing inflammation of the vessel wall and with surrounding hemorrhagic cellulitis.

One feature of this cellulitis was the virtual absence of neutrophilic leukocytes. These cells are destroyed by the toxin of this particular organism, so that in most of the areas one can see very few of these cells. A section taken from the wall of the saphenous vein again showed the basophilic bacteria-laden thrombotic material, and necrotic vein wall and surrounding tissues. A section from the inferior vena cava showed remnants of the necrotic vein wall and septic material within the lumen. The better portions of the lung showed considerable interstitial pneumonia throughout, as commonly occurs in infants. Several branches of the pulmonary arterial system contained thrombi. One of these vessels seen in higher power showed the septic thrombotic material containing great numbers of bacteria. A small thrombosed vessel could be seen, with a surrounding area of early necrotizing pneumonia. There was some diffuse spread of the infection into the surrounding lung tissue. Another view showed a larger focus of pneumonia, again with what probably had been a large thrombosed vessel in the center, but with a more characteristic purulent inflammation surrounding it, and with a hemorrhagic zone at the periphery.

Gross photographs of the brain showed that the left hemisphere had been virtually destroyed by hemorrhagic infarction and thrombosis of vessels. The left cerebellar hemisphere, too, was largely involved. The septum pellucidum had been partially destroyed, and blood clots extended into the lateral ventricle of the opposite side. A number of the cortical veins were thrombosed, and there was almost universal early thrombosis of the dural sinuses.

Nothing abnormal was identified in the gastrointestinal tract. All of the lymph nodes examined showed a picture which is sometimes interpreted as lymphoid exhaustion or atrophy. Certain observers have emphasized this appearance as having diagnostic significance in connection with epidemic diarrhea. I am not so sure that we can be that specific about it. In an infant of our patient's age, who at best has an immature lymphoid system and who has been subjected to severe bacterial infections, cannot be expected to have a very thriving lymphoid system. So I'm not sure that this finding has any great significance.

In summary, I repeat that I interpret this whole complex as consisting of several elements which tend to overlap and which may have had independent inceptions.

One of the problems raised by this case is the possible role of ear infection in relation to diarrhea in a newborn. Dr. Donaldson, would you comment on this?

Dr. J. A. Donaldson, Otolaryngology: I hope you regularly consider ear infection in your tiny patients. In this particular infant, it may have been rather important.

On the first page of the protocol you will find the statement that the tympanic membranes were normal. We don't know who made the notation, but we must assume that the person actually looked at the ears, knew what he was looking at, and did feel that the membranes resembled normal drums. But in the hospital records of other patients we have found notations that the drums were normal, and then the next day have removed impacted cerumen filling the medial half of the canal. Therefore, I think it is very important that if one has not seen the drums, he should report that he did not see them.

Assuming that the drums were normal at the time of admission, how could pus form in the ears? In all fairness, I think we must assume that in this patient they were normal at the time of admission, and ask ourselves where the infection came from. It is important to realize that about 80 per cent of children under the age of three who die in a hospital will be shown on autopsy to have pus in their ears. Most of these children have been quite ill. Many of them have been vomiting, and secondary to vomiting and dehydration, they are likely to have contracted a terminal otitis media.

I should expect, then, that the otitis media in this case—if the initial notation was correct—did not relate to the major pathology. I should assume that the initial examiners were aware of the relationship of otitis media to diarrhea. Dr. Taylor quoted an incidence of infections such as otitis media related to diarrhea. He spoke, I assume, of hospital practice in Cincinnati. Some practicing physicians on the outside would report a much higher incidence. In the presence of diarrhea, the ear is one of the first places for a general practitioner to look. The diarrhea responds very nicely to treatment of the otitis media.

If, then, there was no tympanic-membrane pathology when the patient came in, it was more likely one of these terminal events, completely unrelated, and just an incidental finding at postmortem.

Dr. Stamler: What about the organism?

Dr. Donaldson: The organisms in the ear were the same as those in the chest. They would have been the likely ones to infect the ear if the infection came up the eustachean tube.

Dr. Stamler: In ear infections in infancy this is a fairly common organism, is it not?

Dr. Donaldson: A gram-negative organism would be more common in infancy than at a later age.

Dr. Stamler: I have another discussant I should like to call upon, particularly in regard to the infectious agents involved in this case. Dr. Snyder, the last time I participated in a CPC involving Pseudomonas aeruginosa was in 1957, and at that time Dr. Reino Kallio commented that our state of knowledge concerning this organism was one of abysmal ignorance. I wonder whether you could tell us that any forward strides have been made since 1957. Is there anything new concerning the ability of the patient to withstand gram-negative infections, particularly of this organism?

Dr. Synder: I think an interesting aspect here is the multiplicity of immunologic mechanisms in gram-negative infections. Dr. Taylor has mentioned the role of antibody in preventing gram-negative infection. Studies have shown that very young rabbits are not so susceptible to endotoxin as are older rabbits. Thus some of the effects of endotoxins may be due to an immunologic mechanism such as hypersensitivity. Experimentally, one can establish tolerance to the endotoxin, and the tolerance is now thought to be due to antibody. Therefore it seems that we have one immunologic mechanism which prevents infection, one which is responsible for the detrimental effect of endotoxin and one which can prevent the effect of endotoxin.

With respect to the Pseudomonas, one may speculate that because it is a gram-negative organism the endotoxin is responsible for its pathogenesis. However, the bacterial cells are relatively non-toxic, and injection of these killed cells does not result in a pathologic picture similar to that caused by living organisms. This would indicate that the endotoxin is not very important. Dr. Liu, of the University of Louisville, has fractionated Pseudomonas aeruginosa cultures into several component parts. These fractions are: pyocyanin, extracellular enzymes, hemolysin, slime layer, and the killed bacterial cell. Of these five substances, only the slime layer and the extracellular enzymes were toxic for animals. Thus some progress has been made in the study of Pseudomonas aeruginosa in that the cell has been fractionated and that the components toxic for animals appear to be the slime layer and extracellular enzymes. I think we know less about the Klebsiella-Aerobacter group than we do about Pseudomonas aeruginosa. The Klebsiella-Aerobacter organisms contain an endotoxin and have a capsule. We know little about the mechanisms by which this organism may cause disease.

Dr. Stamler: Does anyone have any information or want to make any comments concerning the treatment of infections caused by this specific organism?

Dr. Gauchat: Very briefly, Pseudomonas happens to be an organism which we encounter frequently in a specific group of patients—those who have cystic fibrosis. With the help of Dr. Snyder and his staff, we are constantly seeking antibiotics which will be effective weapons against Pseudomonas organisms. It has been our experience that it is impossible to predict which of several antibiotics will be effective. I cannot give you statistics or percentages, but many Pseudomonas organisms are presently resistant to Colistin, which is popularly promoted for use against this group of organisms. Many seem to be sensitive *in vitro* to certain of the sulfa drugs such as Triple Sulfa or Kynex, so these are frequently useful therapeutic agents. Tetracycline and streptomycin are rarely effective. Chloramphenicol is also rarely effective.

Dr. H. E. Hamilton, Internal Medicine: Given an infant with diarrhea and an absence of obvious infection, do you consider the possibility of a hidden mastoid or middle-ear infection as the underlying cause of the diarrhea? This used to be taught as a thought worth remembering.

Dr. Gauchat: Yes, we do. It seems likely that the original insulting incident was infection—perhaps both of the middle ears and of the lungs—by the gram-negative organisms described. Perhaps the lateral sinus thrombosis occurred even before the child's original hospitalization, secondarily to his infection and his electrolyte and water imbalances.

ANATOMIC DIAGNOSES

1. Necrotizing cellulitis, left leg (Pseudomonas aeruginosa).
2. Necrotizing thrombophlebitis, left lower extremity, iliac veins, and inferior vena cava.
3. Septicemia (Pseudomonas aeruginosa).
4. Necrotizing pneumonitis, extensive, bilateral, with multiple septic emboli.
5. Otitis media, acute, bilateral.
6. Thrombosis of dural sinuses, generalized.
7. Thrombosis of cerebral veins, multiple.
8. Intracerebral, intracerebellar, and subarachnoid hemorrhage, extensive, with early encephalomalacia.

STUDENTS' DIAGNOSES

1. Sepsis of newborn.
2. Sinus venous thrombosis.
3. Possible brain abscess with brain infarction.
4. Venous thrombosis of leg.

DR. TAYLOR'S DIAGNOSES

1. Klebsiella bacteremia or pneumonia with secondary diarrhea.
2. Central venous system hemorrhage from mechanical shrinkage or sinus thrombosis.
3. Venous obstruction of leg with extension into vena cava.

HAPPY NEW YEAR!

To quote from an old Gaelic blessing:

May the road rise to meet you,
May the sun shine warm upon your face,
And the rains fall soft upon your fields;
And until we meet again, may
God hold you in the hollow of His hand.

THE PROGNOSIS OF THE CORONARY PATIENT

In a recent health column, Dr. Walter C. Alvarez said that he receives letters from many a worried wife whose husband has recovered from a heart attack, complaining that both she and her husband are in daily fear of another, and that their physician has failed to tell them just how the patient should live his life and how much work he should attempt to do.

Here is what he tells these people: "If [your husband] can walk at a good pace for a dozen blocks, if he can go up a flight of stairs, if he can walk up a ramp carrying two suitcases, if he can sit comfortably without any sign of anxiety about breathing, he has what a heart specialist calls a good cardiac reserve of strength, and barring accident he should live for years in good health." He advises patients, "Go ahead and do whatever you can, comfortably. Your heart will tell you what you can do, and what you should not attempt to do—such as running to catch a bus."

A clinician is certainly remiss if he fails to confer at length with the cardiac patient and the patient's wife before discharging him from the hospital. At that conference he should make it clear that no physician can dictate a patient's way of life, but that life can be useful, meaningful and happy despite certain limitations upon activity. Each patient must work out his own program, guided by common sense and by the limits of his cardiac reserve. To the victim of coronary-artery disease, relative values become crystal clear, and deprivation of many accustomed activities becomes unimportant. A life dictated by constant fear of a heart attack is a sad one, and in conferring with the patient the physician should, with good conscience, be encouraging and optimistic.

The patient's wife plays a major role in his adjustment to a more restricted pattern of living. It is she who makes the adjustment either pleasant or unpleasant, easy or difficult, for him. She must avoid a dictatorial or watchdog posture. Instead, she should make every effort to create a relaxed atmosphere and to protect her husband from unnecessary pressures. It is the responsibility of the physician to acquaint the patient's wife with the importance of the role she must play, and conversely, to warn her against hovering over her husband and making him a cardiac invalid.

Fear is not always just a symptom; it can be a disease. Everyone concerned with the care of a patient who has had a coronary occlusion should do everything possible to fortify him, so that he can face the future with courage and confidence. The patient who shops from doctor to doctor seeking a detailed outline of what to do, what not to do and how to live will be sadly disappointed.

CHOLESTEROL AND CORONARY-ARTERY DISEASE

There probably are no more ardent protagonists of a health regimen than those who subscribe to the belief that a diet low in fat, and particularly in saturated fat, reduces the risk of a recurrence of coronary-artery disease. These zealots are so firm in their conviction and so ardent in their proselytizing that they almost constitute a cult. A recent report by a British research committee weakens their tenets.*

In an endeavor to obtain evidence, a controlled trial of a low-fat diet was carried out on a large group of men who had had recent coronary infarctions. The 264 men, all under 65 years of age, each had recovered from a first myocardial infarction and had been cared for in one of three hospitals. Upon discharge, they were assigned at random to one of two groups, one of which was placed on a low-fat diet and the other on a normal diet. From 1957 to 1963, four physicians conducted the study, with the assistance of three dietitians who controlled the diets.

The diagnosis of myocardial infarction was accepted on evidence of: (1) Cardiac pain with abnormal Q waves in the electrocardiogram. (2) Cardiac pain for one hour or more, with S-T changes on the electrocardiogram and associated elevation of SGOT, elevated white blood cell count, raised sedimentation rate or the presence of fever. Among the 264 patients were 32 men who had chest pain at rest and S-T changes on the EKG, but had had no laboratory confirmation of infarction. These patients were regarded as having acute ischemic episodes.

Patients admitted to the study were those who had had their attacks within the previous three months, and most were admitted to the study after one month in the hospital. Twenty-nine patients had received no anticoagulants, but the rest of the group had received anticoagulants for various periods up to 14 weeks. All patients on long-term anticoagulant therapy were excluded from the study. Also excluded were patients with complicating diseases such as diabetes, syphilis, myxedema and congestive failure.

Of the original 264 patients, 12 were later rejected because they would not cooperate, because

* Research Committee: Low-fat diet in myocardial infarction; controlled trial. LANCET, 2:501-504, (Sept. 11) 1965.

they required long-term anticoagulant therapy or because they suffered relapses before the diet could be started. Thus a total of 252 patients were subjected to critical analysis. The mean follow-up time either to the first relapse or to the end of the trial was just over three years for both the low-fat group and the controls.

The primary object of the study was to determine whether a low-fat diet would prove clinically beneficial in a group of unselected patients under ordinary working conditions, as opposed to selected volunteers in a metabolic ward. Patients in the diet group were permitted 40 Gm. of fat daily. This included ½ oz. of butter, 3 oz. of meat, 1 egg, 2 oz. of cottage cheese and skimmed milk. The nature of the fat in the diet was not altered, and additional unsaturated fats were not given. Patients in both groups who were overweight were advised to reduce by lessening their intake of carbohydrates.

The same dietary controls were applied to each group. Each patient was asked to record the weights of all foods consumed on a different day each week for the first seven weeks, and then on the first day of each month. The patient and his wife were interviewed by the doctor and the dietitian during the patient's first outpatient visit, about two weeks after his discharge from the hospital. Subsequently, they were seen every two weeks for three months, every three months for the next two years, and then every six months. Particular attention was given to the recurrence of chest pain, and the information was carefully recorded in the progress notes. The serum cholesterol was determined at each visit, and an EKG was taken annually. At each visit the dietitian checked the diet records and answered questions concerning the diet.

The assessment of the patients' progress was based on two criteria: (1) reinfarction, and (2) death from coronary heart disease. Because a change in therapy was often instituted after reinfarction, only the first relapse or the patient's death was used in evaluating the results of the trial. Diagnosing a relapse in an individual case was often difficult because of the frequency of chest pain without changes in the EKG or laboratory confirmation of reinfarction. The diagnosis of recurrence was made by the chairman of the research committee, who did not know whether the patient was in the low-fat or in the control group. The criteria used to establish a diagnosis of relapse were identical in the two groups, and depending on the evidence the cases were graded as definite, probable or possible. Among the 123 patients in the low-fat group, there were 27 definite relapses, four probables, 12 possibles, and three deaths, for a total of 46. In the control group of 129 patients there were 27 definite relapses, seven probables, 10 possibles and four deaths, for a total of 48. At four years, the cumulative relapse rate was 38 per cent in the low-fat group, and 40 per cent in the control group.

Initially, the difference between the serum cholesterol levels in the two groups was not significant. By six months the cholesterol level was significantly lower in the treated group; at one year the difference was negligible; and at two years the levels were the same.

The patients on the low-fat diet lost more weight than did those in the control group, a fact which supported a real difference in their dietary behavior. The calculated daily fat intake in the diet group was approximately 45 Gm./day, and it was 110-130 Gm./day in the control group. The estimated daily caloric intakes were 1,900-2,000 and 2,300-2,600 calories, respectively. Interviews by an independent dietitian indicated that 22 of 30 unselected patients in the low-fat group were keeping to the prescribed diet. Of 23 control patients interviewed, 18 acknowledged some reduction of their fat intakes as a means of losing weight, but on the basis of dietary weighings the reductions were thought to be small.

As a result of their study, the authors concluded that in men under 65 years of age who have survived a first myocardial infarction, a low-fat diet does not improve prognosis, and they asserted that it has no place in the treatment of myocardial infarction.

The place of diet in the management of patients who have had myocardial infarctions is still controversial, of course, and further controlled studies are needed. Yet the British study raises some doubt concerning its merit, and weakens the tenets of the low-fat cult.

A COMMUNITY PROJECT FOR PARENTS AND PHYSICIANS

A recent report concerning the incidence of illegitimate births to teen-age girls in a New York community of 30,000 population is startling.* During the period from 1959 to 1963, an average of 25 babies were delivered each year at the local hospital for mothers 12 to 16 years of age. The average school population of girls in this age group was 1,874.

According to the Division of Vital Statistics of the Iowa State Department of Health, 2,001 illegitimate babies were born in Iowa in 1964. That number represented an increase of 12.6 per cent from 1963. The increase has been continuous since 1956. Then there were 18.37 illegitimate births per 1,000 live births. The rate had risen to 36.09 per 1,000 in 1964, for an increase of 96.5 per cent in the eight-year period. In the United States as a whole, the illegitimacy rate among white women was 19.0 per 1,000 live births in 1956, and it had grown to 30.7 per 1,000 in 1963.

Of the 2,001 illegitimate births in Iowa during 1964, 22 were to girls under 15 years of age; 68 to 15-year-olds; 128 to mothers 16 years of age; 203 to 17-year-olds; 185 to 18-year-olds; and 205 to to 19-year-olds. Thus 1.1 per cent of illegitimate live births occurred to girls under 15 years of age, and 39.6 per cent to girls between the ages of 15 and 19. By contrast, just 11.2 per cent of *legitimate* live births occurred in women under the age of 19 years.

Editorials continued...

The alarming increase in venereal disease in this country, particularly in the younger age groups, is another index of promiscuity. In 1957 there were some 214,000 reported cases of gonorrhea in the United States, and the number increased to over 278,000 reported cases in 1964. These figures are probably ridiculously low, for although there were 48,000 reported cases of venereal disease in California during 1964, Ketterer and Condit** estimate that there actually were 100,000 or more. Physicians are notoriously careless about reporting venereal disease.

In the State of Iowa during 1964, 1,700 cases of gonorrhea were reported, and surveys indicate that there was poor reporting. The increase among youth is clear. In Iowa last year 50 cases were reported in youngsters between 10 and 14 years of age; 350 cases in the 15-19 age group; and some 575 in the 20-24 age bracket.

Judging by the increase of illegitimate births among teen-age girls and the increased incidence of venereal disease among both girls and boys, it is apparent that somehow adults are not doing a very good job of preparing youth for wholesome adulthood. This failure is not peculiar to any one area of the country, and it is just as apparent in small towns as it is in cities. Neither is it restricted to any one social or economic class.

Ideally, sex education and preparation for responsible citizenship, marriage and family life should take place in the home. In the right kind of home, this training takes place naturally over a period of years and without formal instruction in sex *per se*. In a wholesome home environment the child learns of the meaning and beauty of love, the significance and the substance of trust and respect, and the importance of consideration and restraint in human relationships.

It is there that he learns the difference between right and wrong, and between good and bad. It is there that he learns the moral values and standards of conduct that befit a man or a woman. It is there that he learns the roles of male and female in human reproduction, without obscenity or smut, but rather as a part of God's plan for the propagation of the species. Fortunate is the child who grows up in such an environment.

Unfortunately most parents have abdicated their responsibility for sex education. Just as unfortunately, most public schools discretely ignore the subject, or if they make some effort at teaching it, they treat it in a haphazard and ineffectual manner. Usually a film on menstruation is shown to fifth-grade girls, and one on the subject of growing up is shown to sixth-grade boys. Then in high school, those students who take a course in biology are given a superficial exposure to the anatomy and biology of sex.

It seems that it is about time for adults to abandon mid-Victorian prudery and shyness, and begin preparing youngsters to cope with the realities of life. This preparation cannot await puberty and adolescence, but should be a part of elementary education. The distinction between sex information which encompasses anatomy and biology, and sex education which teaches the attributes necessary to good and wholesome living deserves special emphasis.

If the responsibility for sex education is relinquished to the schools, then teachers should be given community support in that phase of their work. Physicians and clergymen should conduct workshops for teachers and parents, with help from psychologists and social workers if those people are available locally. Moreover, community facilities for providing wholesome entertainment to teen-agers are absolutely essential. There should be no hesitancy about teaching that steady dating and intimacies are as hazardous to teen-agers as playing with matches is to a child. The reasons for this admonition should be made perfectly clear. Most young people are sufficiently aware of the immediate consequences, but they lack perspective and cannot appreciate the effects that illicit sexual behavior will have upon their entire lives.

Social illness in their community should be of as great concern to physicians as are physical illnesses or an epidemic. Since the problems of promiscuity, of illegitimacy and of venereal disease are increasing, it is appropriate for physicians to take more active roles in community-wide preventive programs.

I have no doubt at all the Devil grins,
As seas of ink I spatter.
Ye gods, forgive my "literary" sins,—
The other kind don't matter.

—Robt. Service

THE KEOKUK DISASTER

The tragic catastrophe in Keokuk which has taken so many lives and resulted in serious injury to so many others has saddened everyone in Iowa. We extend our sympathy to those who were injured, to the families of those who have died, and to the entire community. We hope that those who survive extensive burns may find a special quality of courage to sustain them through the long days and weeks and months of recovery.

The Keokuk disaster should prompt a close scrutiny of the preparations for disaster in every other community in the state. This scrutiny should not devolve upon civil defense directors alone. Rather, it should be the concern of each individual physician, the local medical societies and the hospitals. An explosion similar to the one in the armory at Keokuk could occur in almost any school, church or theater, and in any community,

* Keeve, J. P.: Selected characteristics of primiparous 12-16 year old girls. PEDIATRICS, **36**:394-404, (Sept.) 1965.

** Ketterer, W. W., and Condit, P. K.: Syphilis eradication: task ahead. CALIFORNIA MED., **102**:306-309, (Apr.) 1965.

large or small. How well could your community care for some 60 critically burned and injured people?

According to the Office of Civil Defense for the State of Iowa, Ray Stiles, Director, preparations for civil defense are well organized in 26 of the 99 counties in Iowa, and are partially organized in 47 others. There are 26 emergency-hospital units stored at strategic places throughout the state, each equipped for the care of 200 patients.

No matter how detailed the planning, a disaster creates a great deal of confusion, and the machinery operates less efficiently than had been planned. Mobilization of disaster teams to deal with "injuries" occasioned by a simulated disaster, though inconvenient, is a true test of a community's ability to cope with a serious emergency. Such drills have been conducted at Burlington and at Marshalltown within the past few months, and in a few other towns less recently. Communities that have never held a drill, or have held none within the past several years, should prepare to follow their example.

For the benefit of physicians throughout the rest of Iowa, we hope that the doctors in Keokuk will send a detailed report on the manner in which their disaster was met, for publication in the JOURNAL. In the meantime, let's all of the rest of us make sure that adequate preparations for the care of mass casualties are made in our respective communities.

Medical Advances in 1965

Scientists who try to understand life by studying its lowest common denominators made some important advances in 1965. No one can yet answer the question "What is life?" But this year, for the first time, scientists put together a synthetically-produced model of a nucleic acid—one of the lowest common denominators—and saw it reproduce itself in a test tube.

Other major news stories in biology and medicine this year included:

- The first determination of the complete chemical structure of a nucleic acid.
- Cultivation of the leprosy bacillus in tissue culture for the first time—an advance that can mean much for investigators trying to develop medicines to prevent or combat the disease.
- The apparent implication of a virus or other cancer-causing agent in leukemia among several members of a single family. Viruses have been implicated in certain animal leukemias, but their role in the human form of the disease has never been clear.

The first synthesis of a self-reproducing component of living matter was achieved at the University of Illinois Center for Advanced Study. Sol Spiegelman, Ph.D., and co-workers assembled a self-propagating infectious ribonucleic acid of the bacterial virus Q-beta. Ribonucleic acid (RNA) is one of the complex chemicals on which the heredity of living organisms is coded. The other is deoxyribonucleic acid (DNA). Virus Q-beta, one of the group of viruses called bacteriophages, because they attack bacteria, is an organism whose genetic coding is carried on RNA.

In most living organisms the basic genetic code is DNA-borne, and RNA acts as a messenger between the DNA master plan and the cell machinery. As far as in known, RNA carries the master plan only in some viruses. The nucleic acid in a virus is surrounded by a protein coat. When a virus attacks a bacterial cell, it leaves the protein coat outside after "injecting" the nucleic acid. The viral nucleic acid takes over the genetic machinery of the cell and uses it to direct the cell to produce more viral nucleic acid and viral protein coats. Eventually, the cell disrupts, spilling the assembled viruses into the extracellular environment, where they can attack more cells.

Dr. Spiegelman and his group said the key to the synthesis was a purified enzyme, a chemical that takes part in chemical reactions but is not itself changed. The enzyme, RNA-dependent-RNA-polymerase ("replicase," for brevity) was induced in Escherichia coli by infecting the bacterial cells with virus Q-beta. Replicase is a natural product of virus Q-beta infection. It is the "runner" which helps to assemble copies of viral nucleic acid, according to viral RNA instructions, in the invaded cell. Purified enzyme was then mixed with RNA from Q-beta virus and the component chemicals of which RNA is made. No bacterial cells were present in the mixture, and no virus.

With the viral RNA acting as a template or pattern, the enzyme assembled component chemicals into new strands of RNA. Subsequent experiments proved that the synthesized RNA was as competent as viral RNA in acting as a template for the formation of still more synthesized nucleic acid.

Another group of scientists, at Cornell University, in Ithaca, New York, succeeded in determining the structure of an RNA molecule. Knowledge of the chemical structure of a nucleic acid is critical information, for the repeated occurrence of certain chemical bases in the molecule comprises the "code" for the genetic information carried by that specific nucleic acid.

In this case the nucleic acid was alanine-specific transfer RNA. In non-chemical terms, the nucleic acid is a form of RNA which operates under DNA instructions, transferring the amino acid alanine to a point in the cell where amino acids are assembled into proteins. Using alanine-specific transfer RNA isolated from bakers' yeast, Robert W. Holley, Ph.D. and fellow investigators determined

that the nucleic acid is made up of 77 bases, and described the order in which the bases occur.

A disease that remains largely cloaked in mystery is human leukemia. More than in any other human cancer, viruses seem implicated in it, and yet proof of a viral etiology is still lacking. In 1965, for the first time, a cancer-causing agent that may be a virus appeared to have been proved to exist. Presumptive evidence was found in a family where an abnormal chromosome (known as the Philadelphia chromosome) was detected in (1) a grandfather who recently died of chronic myelogenous leukemia; (2) his daughter; and (3) two grandchildren. Neither the daughter nor the grandchildren have the disease, but chronic myelogenous leukemia is believed to have claimed the lives of the dead man's father, brother, sister and a nephew.

Chromosomes are the X- and Y-shaped cellular bodies that carry the genes of heredity. The Philadelphia chromosome, seen only in persons with chronic myelogenous leukemia, is an abnormal body with part of one arm missing. A nongenetic, transmissible agent—perhaps a virus—may be responsible for the abnormal chromosome in this family.

Mayo Clinical Reviews

The dates for the 1966 Mayo Clinical Reviews are March 28-30 and April 4-6, and the place is the Mayo Civic Auditorium, Rochester, Minnesota.

The number of physicians who can be accommodated is limited. For this reason, identical programs will be offered during two successive weeks. Those wishing to attend should correspond with Mr. M. G. Brataas, Mayo Clinic, Rochester, indicating which series they wish to attend. The program is acceptable for credit by the American Academy of General Practice.

Monday, March 28 and April 4

8:35 a.m. "The Tetanus-prone Wound"—Dr. N. A. Christensen
8:55 a.m. "Practical Technics in Treatment of Facial Lacerations"—Dr. J. N. Simon
9:25 a.m. "Medical Treatment of Parkinson's Disease"—Dr. D. W. Mulder
9:45 a.m. "Surgical Treatment of Parkinson's Disease"—Dr. C. S. MacCarty
10:35 a.m. "Unusual Manifestations of Thyroid Disease"—Dr. W. M. McConahey
10:55 a.m. "A More Vigorous Approach to Emphysema"—Dr. D. E. Dines
11:15 a.m. "Troublesome Parasites"—Dr. J. H. Thompson, Jr.
1:30 p.m. "Transfusion Reactions"—Dr. H. F. Taswell
2:20 p.m. "Current Medications for Rheumatic Diseases"—Dr. L. E. Ward
2:40 p.m. "Planning a Treatment Program for Rheumatoid Arthritis"—Dr. J. G. Mayne
3:30 p.m. "Pediatric Gynecology"—Dr. M. E. Mussey
3:50 p.m. "Psychiatric Drug Therapy"—Dr. T. L. Brannick
4:10 p.m. "Pain in the Eye"—Dr. T. J. Kirby, Jr.
8:00-9:15 PANELS
TOO MUCH OR TOO LITTLE THYROID—Drs. F. R. Keating, O. H. Beahrs, D. C. Purnell and R. E. Lee
OBESITY—Drs. H. N. Hoffman, M. J. Barry and C. F. Gastineau
FRACTURES—Dr. E. W. Johnson, moderator

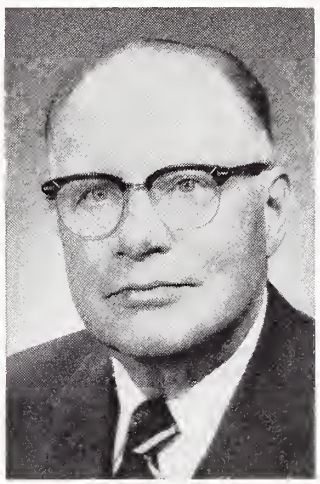
Tuesday, March 29 and April 5

8:30 a.m. "Inguinal Hernia"—Dr. J. W. Kirklin
8:50 a.m. "Acute Arterial Occlusion"—Dr. J. W. Joyce
9:20 a.m. "Misconceptions About Prostatism"—Dr. L. F. Greene
9:40 a.m. "Newer Approaches to Urinary Tract Infection"—Dr. L. H. Smith
10:30 a.m. "The Intensive Care Unit"—Dr. J. C. Broadbent
10:50 a.m. "Dysarthria as a Diagnostic Cue"—Dr. F. L. Darley
11:10 a.m. "Breech Delivery"—Dr. C. E. Johnson
12:00 m. LUNCHEON AND ROUND TABLE DISCUSSION
1:30 p.m. "Corticosteroids in the Management of Asthma"—Dr. H. M. Carryer
1:50 p.m. "The Asthmatic Child"—Dr. G. B. Logan
2:20 p.m. "Local and Regional Block Anesthesia"—Dr. R. R. Jones
2:40 p.m. "Common Farm Accidents"—Dr. H. H. Young
3:30 p.m. "Psychiatric Emergencies"—Dr. E. M. Littin
3:50 p.m. "Pitfalls in Diagnosis of Anemia"—Dr. J. M. Kiely
4:10 p.m. "Peripheral Facial Nerve Palsy"—Dr. D. T. R. Cody
8:00-9:15 PANELS
ITCHING—Drs. H. O. Perry, L. F. Pilling, G. D. Malkasian and J. R. Hill
BEDSIDE EVALUATION OF ACUTE RENAL FAILURE—Drs. W. S. Payne, E. P. Didier and R. D. Wagoner
"BREAD AND MARGARINE" CARDIOLOGY—Drs. M. W. Anderson, S. L. Nunn, T. T. Schattenberg and B. D. McCallister

Wednesday, March 30 and April 6

8:30 a.m. "Peripheral Varicosities"—Dr. T. T. Myers
8:50 a.m. "Steroid Injection"—Dr. A. J. Bianco
9:20 a.m. "Induction of Ovulation"—Dr. R. A. Lee
9:40 a.m. "Urinary Incontinence in the Female"—Dr. R. E. Symmonds
10:30 a.m. "Recent Advances in Antibiotic Therapy"—Dr. J. E. Geraci
10:50 a.m. "Current Treatment of Epilepsy"—Dr. L. G. Rushton
11:10 a.m. "Office Management of Anorectal Lesions"—(Movie) Dr. C. E. Culp
12:00 m. LUNCHEON AND ROUND TABLE DISCUSSION
1:30 p.m. "Where Are We Going in Transplantation"—Dr. G. A. Hallenbeck
1:50 p.m. "Diverticulitis"—Dr. J. R. McPherson
2:20 p.m. "Indications for Surgery of Valvular Disease"—Dr. D. C. McGoon
2:40 p.m. "Advice to the Deaf Patient"—Dr. L. D. Hedgecock
3:30 p.m. "Abdominal Angina"—Dr. L. G. Bartholomew
3:50 p.m. "Mental Retardation and Specific Learning Difficulties"—Mrs. Josephine Ewert
4:10 p.m. "Indications for Carotid Artery Surgery"—Dr. J. P. Whisnant

President's Page



The actions of the AMA House of Delegates, during the recent interim meeting held in Philadelphia, made two definite impressions upon me. First, I was reassured to find, once more, that the principle of democracy prevails in AMA activities. Second, I learned that a small delegation convinced of its philosophy can accomplish "Big Things" in organized medicine at the national level. Iowa physicians participating in the Philadelphia meeting proved both of those points.

Following instructions from the IMS Executive Council, the Iowa delegation introduced a resolution proposing reaffirmation of the "usual and customary fee" concept, and asking that it be endorsed for use in negotiations with all third parties. The AMA House of Delegates did just that.

Also, with leadership from Iowa, the House decided to "note" rather than to "approve" the "prevailing fee" concept advanced by Blue Shield. That approach was "noted" as one means of compensation that might be used in those regions where the local or state medical society approved it.

Iowa's representatives at the AMA meeting believed in the logic of their resolution, and were firmly convinced that "usual and customary fees" would serve the best interests both of physicians and of the American public. Through long hours of hard work, and with able help from other states, Iowa physicians—particularly the three delegates and the alternate—convinced the AMA House that they were right, and thus proved that grass-roots physicians still guide the AMA.

Frank Ober

President

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Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

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Actions of the AMA House of Delegates

Philadelphia, Pennsylvania
November 28-December 1, 1965

"Usual and customary" fees and prevailing fees, abortion and sterilization, billing and payment for medical services, membership dues, organization of the House of Delegates, and federal health care laws were among the major subjects acted upon by the House of Delegates at the American Medical Association's 19th Clinical Convention held Nov. 28-Dec. 1 in Philadelphia.

President James Z. Appel in his address to the House on Sunday described medicine's efforts "to guide in the best possible direction the actions that government agencies are now taking to activate existing law (P.L. 89-97)." He then reviewed the activities and responsibilities of the six technical advisory committees under the Medicare law.

"Their suggestions have been received favorably in most instances," he said. "And we are hopeful that they will be translated into the final published regulations . . . (but) we know that in certain significant instances this will not be true." (See "The Month in Washington" in this issue of the JOURNAL.)

The House elected Dr. Drew M. Petersen of Ogden, Utah, to fill an unexpired term on the Council on Medical Service.

Final registration reached a total of 9,423, including 4,619 physicians.

"USUAL AND CUSTOMARY" AND "PREVAILING" FEES

One of the most controversial issues before the House and the Reference Committee on Insurance and Medical Service was the "usual and customary" fee concept and the prevailing fees program of the National Association of Blue Shield Plans.

The House reaffirmed its support of the "usual and customary" fee concept as the basis for reimbursing physician participants in government programs at all levels of government. It also urged "the individual physician's usual and customary fee concept to all third parties."

It took this action after modifying a Board of Trustees' report on the new "prevailing fees" program of NABSP. The modified report recommended:

"That the concept of the prevailing fees program of the NABSP be noted as one of the methods of compensation in those regions where the prevailing fees program is approved by the local or state medical society."

In its report, the Board recalled a statement adopted by the House at the 1965 Annual Convention, which recommended that when government assumes financial responsibility for an individual's health care, reimbursement for professional services should be on the same basis as in the case of other indispensable elements of health care.

"Therefore, reimbursement for the services of physicians participating in government-supported programs should be on the basis of 'usual and customary' fees," the statement said.

ABORTION AND STERILIZATION

Recommendations for the enactment of legislation to legalize abortion and sterilization under certain conditions were referred to the Board for further study. This action was taken after the House had received a report from the Board containing the recommendations of the Committee on Human Reproduction.

The House did suggest that the AMA can "render a distinct public service in this matter by conferring with other interested groups such as lawyers, clergy, sociologists, legislators, and government administrators."

It concurred in the reference committee's report that "it is not appropriate at this time for the AMA to recommend the enactment of legislation in this matter (abortion) for all states. The problem is essentially one for resolution by each state through action of its own legislature."

The report also stated that "it is true that there are medical implications in such legislative decisions; physicians in each state should freely provide information and guidance on these medical implications. However, enacting laws to integrate the medical aspects with the moral, ethical, religious, economic, social tradition, and other aspects of the problem is clearly the exclusive prerogative and the responsibility of the legislature of each separate state."

In its report the committee said the problems of sterilization "appear subject to the same general considerations as the problems of abortion."

On the problem of contraception the House reaffirmed its 1964 policy statement that "the prescription of child-spacing measures should be available to all patients who require them, consistent with their creed and mores, whether they obtain their medical care through private physicians or tax or community-supported health services."

It also endorsed a statement that "appropriate legislation be enacted, wherever necessary, so that all physicians may legally give contraceptive information to their patients, consistent with the policy statement of December, 1964, and with the judgment and conscience of each individual physician."

BILLING AND PAYMENT FOR MEDICAL SERVICES

Eight statements on fees charged by physicians for medical services were affirmed by the House. These were applicable "irrespective of whether such fees are paid by the patient, or paid or reimbursed in whole or in part under Public Law 89-97, or any other third party plan," the House stated. Here are the eight statements:

"1. The intimate relationship between physician and patient is served best without the interposition of any third party carrier, whether in the area of diagnosis and treatment or the payment for these services.

"2. It is the patient's responsibility to deal with third party carriers in the area of financial assistance provided that the physician is at all times mindful of his obligations to the patient under Section 1 of the Principles of Medical Ethics.

"3. The physician-patient relationship is served best when there is an advance understanding regarding the payment of fees and the physician bills the patient directly for services rendered. However, the physician is ethically free to choose in each case the manner in which he is to be compensated, based upon the exercise of his independent judgment.

"4. The American Medical Association does not approve of any program which may directly or indirectly promote the charging of excessive fees or which interferes with the physician's right to charge fees commensurate with the services he renders.

"5. The American Medical Association opposes any program of dictation, interference, or coercion, whether direct of indirect, affecting the freedom of choice of the physician to determine for himself the extent and manner of participation or financial arrangement under which he shall provide medical care to patients under Public Law 89-97, or other third-party plans.

"6. It should be remembered that insurance does not create any new wealth. It merely assists in conservation. Insurance may conserve the ability of an insured person to fulfill his normal financial obligations. It does not enhance his ability to discharge added responsibilities if they are in the form of increased fees. To use insurance as an excuse to revise professional fees upward is but to contribute to the defeat of its purpose. If these indisputable and self-evident facts are not embraced by the entire membership of the profession, then it will have dealt irreparable harm to the whole movement. Also, any such failure might give impetus to whatever demand now exists for forcing rigid benefit schedules on the professional. (The foregoing is from a report of the Council on Medical Service to the House of Delegates at the Clinical Meeting in 1954.)

"7. The charging of an excessive fee is unethical and is contrary to Section 7 of the Principles of Medical Ethics. The physician's fee should be commensurate with the services rendered and the patient's ability to pay. (The foregoing is from a report of the Judicial Council which was approved by the House of Delegates at the Clinical Meeting in 1960.)

"8. It is not contrary to conscience for the physician to consider the patient's ability to pay if he fixes his particular fee within reasonable limits. In matters relating to fees, the physician should try, to the best of his ability, to insure justice to the patient and himself and respect for his profession. (The foregoing is from an opinion of the Judicial Council in 1958.)"

MEMBERSHIP DUES

A $25-a-year increase in membership dues, effective Jan. 1, 1967, was endorsed by the House when it was informed by the Board that additional income will be needed by then to avoid deficit spending.

The increase, to $70 a year for the AMA's 165,000 dues-paying members, will go before the House for final action at the 1966 Annual Convention because AMA Bylaws state that annual dues may be prescribed by the House only for the ensuing calendar year.

Board Chairman Percy E. Hopkins, M.D., told the House that "during 1964 and 1965, the AMA will have incurred an operating deficit of more than 1 million dollars." The budget for 1966, he said, is now narrowly in balance.

The 1966 budget calls for spending some 27.6 million dollars, Doctor Hopkins reported, including almost 10½ million dollars on scientific programs, 5 million on health education and other medical service programs, more than 1 million to maintain physician records, and another million in the communications program. Travel and meeting costs will exceed 2 million dollars.

"In a society," Doctor Hopkins said, "which has adopted inflation as a national policy and in which our system of medical care has become a pawn of politicians, it is not realistic to expect that we can limit tomorrow's programs to yesterday's income. Already demands are mounting, from medical societies and physicians, for a stronger and more effective AMA. These needs must be met and they must be adequately financed."

Doctor Hopkins said that AMA's income in 1960 was just under 16 million dollars, while in 1966 it will exceed 27 million, an increase of 11 million. "This represents increases of 3.9 million dollars from membership dues, 4.3 million in advertising revenue, and 2.8 million from other sources.

"During this same period," he stated, "the challenges thrust upon the Association required even greater expenditures—from 15.7 million dollars in 1960 to a need for 27.6 in 1966."

In support of the dues increase, the House noted that AMA's dues-paying members provide less than 30 per cent of the Association's income.

GUNDERSEN REPORT

The House approved some of the many recommendations of the Committee to Review the Or-

ganization of the House (the Gundersen Committee) but it did not approve a number of others.

Here are the House actions on some of the committee's recommendations:

• *Size of the House of Delegates.* Approved the suggestion that the growth of the AMA House be slowed down after it reaches 250 members. When it reaches that size, the apportionment ratio will be automatically raised from one delegate per 1,000 members, or fraction thereof, to one delegate per 1,250 members, or fraction thereof, in electing further delegates to represent each state association.

• *Reports of Councils and Committees.* Rejected the proposal that reports of the Council on Medical Service and Medical Education be transmitted through the Board of Trustees before being presented to the House.

• *Reference Committees.* Adopted the recommendation that there be three reference committees by name—Amendments to Constitution and Bylaws, Credentials, and Rules and Order of Business—and as many others be appointed "as may be required to consider the items of business before the House."

• *Tenure of Subcommittee Members of Standing Committee.* Approved a change in the Bylaws "to limit to specified terms of one to three years the tenure of members of special committees of the councils and committees of the House, with a limitation of 10 consecutive years of service."

• *Committee on Medical Practices.* Concurred in a recommendation that the Committee on Medical Practices be discharged with thanks, and its responsibilities "be assigned by the Board to existing councils and committees."

• *Committee on Insurance and Prepayment Plans.* Rejected a plan to make this committee a council of the Board, and the committee was retained under the Council on Medical Service.

• *Tenure of Office of Trustees.* Turned down a proposal that would have affected the tenure of office of AMA trustees.

• *Affairs of Standing Committees.* Directed that a Bylaws change be prepared to remove the privilege of the Councils on Medical Service and on Medical Education of nominating to the Board the secretary of the respective councils. Also approved the suggestion that a vice chairman be elected by each standing committee of the House.

• *Resolutions to House.* Rejected the idea of a resolutions-expediting committee, and the recommendation that the deadline for resolutions be 10 days prior to the House meeting.

FEDERAL HEALTH CARE LAWS

The House took a number of actions with regard to federal health-care laws passed in 1965, such as PL 89-97 (Medicare) and PL 89-239 (the Heart Disease, Cancer and Stroke Amendments). These actions included:

—"That the AMA immediately seek remedial action to delete the requirement in Public Law 89-97 that a patient be hospitalized to establish eligibility for nursing home care."

—"That the AMA immediately seek remedial action to amend Public Law 89-97, Part B, Title XVIII, by deleting the word 'receipted,' from Section 1842—Part 3, Item B, line (ii), and substituting 'such payment will be made on the basis of a method of payment so arranged to preserve and continue the profession's current practice of billing.'" Also approved "that the AMA recommend that the Department of Health, Education and Welfare establish that an agreement for payment between the patient and physician constitutes valid evidence of services rendered."

—Authorized a study of the constitutionality of PL 89-97 by calling on the Board to "take such action as may be necessary and appropriate to provide for the study and investigation of all aspects of PL 89-97 for the purpose of determining possible court action to test the legality and constitutionality of any provision or regulation issued under the law," and authorized the Board to "initiate such legal proceedings as it may deem advisable to implement the purpose and intent of this resolution."

—Endorsed the Council on Medical Services' recommendation "that the state and local medical societies be urged *at this time* to assume leadership in the establishment of local advisory committees" under the Heart Disease, Cancer and Stroke Amendments of 1965. The House noted that a National Advisory Council under PL 89-239 already has been appointed by federal officials and that the AMA was not given an opportunity to recommend possible appointees to the Council. "Therefore," the House declared, "active physician participation at the state and local levels is of utmost importance."

—Urged HEW to "seek consultation with practicing physicians" in formulating regulations under Title XIX as has been done under Title XVIII of the Medicare law. It also instructed the AMA President and AMA Advisory Committee to HEW to "offer and urge such consultation."

—Adopted a resolution that the Board "continue to seek, through all appropriate means, the implementation and administration of federal medical and health programs other than those of the Armed Forces and Veterans' Administration by the Surgeon General of the Public Health Service, and especially those programs under Title XIX of PL 89-97."

—Declared that the AMA Advisory Committee on PL 89-97 and 89-239 should persist in its efforts to achieve "practical recognition" by HEW of the differences between utilization review and claims review. The House adopted a report of the Council on Medical Services which said that "widespread confusion exists between the utilization review

function and the claims review function." It also adopted a series of recommendations in the report aimed at clearing the confusion.

OTHER IMPORTANT ACTIONS

A study committee to evaluate planning techniques and development, which was established by the Board of Trustees, was concurred in by the House. The committee was given the tasks of (1) reviewing and studying current planning procedures in AMA, and (2) studying and recommending new mechanisms for organizational arrangements to achieve more effective planning and development in the future. Membership on the committee includes five Board members, the chairmen of the Councils on Medical Services, Medical Education, and Legislative Activities, the Speaker of the House, and two House members selected by the Speaker.

Disapproval was expressed by the House of portions of the Coggeshall report, "Planning for Medical Progress Through Education," published earlier this year by the Association of American Medical Colleges. The House opposed "the basic philosophy" of portions of the report; such as:

—That the AAMC should "serve as spokesman for organizations concerned with education for health and medical sciences" and "no other organization is in a comparable position to bring together and express a comprehensive view."

—That "the professional aspects of education for health and medical sciences should be regarded as an essential function and fully integrated component of university organization, with decreasing dependence upon or control by organized professions and their related associations."

A policy statement on federal aid to medical education was adopted by the House. It urges that (1) a major objective of the policies of the AMA should be to place the control of the full range of medical school functions in their institutional governing bodies, (2) action of the AMA should be designed to achieve this objective by proposal of appropriate legislation, and (3) the AMA should foster diverse sources of support for medical schools under circumstances that prevent any extramural source from exercising controlling influence.

The House approved a resolution aimed at responding immediately at the national and local levels to statements discrediting medicine. It directed the Board to provide for such response by the AMA and encourage state and local medical societies to react similarly to statements appearing at the local level and concerning matters within the society's competence and knowledge.

There were scores of other actions by the House. Briefly here are some of them:

- Defeated a proposal to set more stringent requirements for calling a special session of the House.
- Approved a Bylaws change permitting recognition by affiliate AMA membership of physicians "who are members of the chartered national medical societies of foreign countries, to be approved and nominated by the Judicial Council" and members of the press who have served medicine well.
- Approved a resolution calling for continued efforts, through "all appropriate channels," to achieve a separation of billing and payments for professional fees from hospital charges under insurance contracts written by the health insurance industry.
- Urged the American Hospital Association to "assist the hospitals of the U. S. to establish a system of uniform cost accounting and billing."
- Asked that all colleges and universities should have health education programs for their students.
- Commended physicians in government service for "their support of the medical profession and their service to the public."
- Agreed to a re-writing of two sections of a model agreement between hospitals and physicians providing professional services in hospital emergency departments to conform to principles established by the House.
- Approved measures aimed at decreasing substantially the perinatal death rate through perinatal study committees in hospitals.
- Requested state medical associations to act to assure that physicians are properly represented on state Hill-Burton hospital advisory councils.
- Asked the Federal Aviation Agency to change its regulations so that any person applying for a pilot's license would be giving his implied consent to sobriety examinations by aviation officials.
- Adopted a statement by Edward R. Annis, M.D., commending Arthur Hess, the director of the Social Security Administration's Bureau of Health Insurance, for his "wholehearted cooperation" with the AMA's advisory and technical committees on Medicare.
- Decided that AMA Conventions should continue to open on Sunday, and that the inauguration of the incoming president should be held on Tuesday evening of the Annual Convention.
- Instructed the Council on Medical Service and its Committee on Welfare Services to develop for the AMA its definition and principles for the determination of medical indigency.
- Accepted for information an opinion adopted jointly by the Council on Medical Services and the Judicial Council which states that ". . . when a physician assumes responsibility for the services rendered to a patient by a resident or an intern, the physician may ethically bill the patient for services which were performed under the physician's personal observation, direction and supervision."
- Repeated a previous policy statement urging the creation of a separate post in the Cabinet of

the President of the U. S. for a Secretary of Health.

• Commended past-president Edward R. Annis, M.D., for "his leadership, his dedication, and his tremendous contribution to medicine's campaign to preserve the world's finest system of medical care."

• Elevated to status of "Council" the Committee on Environmental and Public Health.

• Approved the following schedule of AMA Conventions:

Annual Conventions—1966, Chicago; 1967, Atlantic City; 1968, San Francisco; 1969, New York City; 1970, Chicago.

Clinical Conventions—1966, Las Vegas; 1967, Houston; 1968, Miami Beach; 1969, Denver; 1970, Boston.

Coming Meetings

IN STATE

Jan. 18-19 **Postgraduate Course on Obstetrics and Gynecology,** Dept. of Obstetrics and Gynecology of the U. of I. College of Medicine, Iowa City.

Feb. 15-18 **Refresher Course for the General Practitioner, U. of I. College of Medicine,** Room E-331, Medical Amphitheater, University Hospitals, Iowa, City.

Feb. 24-25 **Sioux Valley Medical Association, Annual Meeting,** Sheraton-Warrior Motor Inn, Sioux City.

CONTINENTAL U. S.

Jan. 5-6 **Seminar on Renal Diseases,** Hammack Auditorium, Menorah Medical Center, Kansas City, Missouri.

Jan. 10-14 **Postgraduate Course on Medicine of Tomorrow: Recent Advances in Internal Medicine, American College of Physicians,** Engineering Building Auditorium, Univ. of Alabama Medical Center, Birmingham.

Jan. 13-15 **Sectional Meeting, American College of Surgeons,** Americana Hotel, Bal Harbour, Florida.

Jan. 15-16 **Symposium on Fluids and Electrolytes in Clinical Practice, The Minnesota Heart Association,** Radisson Hotel, Minneapolis.

Jan. 16-22 **12th Annual General Practice Review,** University of Colorado School of Medicine, Denver.

Jan. 17-21 **35th Annual Mid-Winter Convention in Ophthalmology and Otolaryngology, Research Study Club of Los Angeles,** Statler Hilton Hotel, Los Angeles.

Jan. 19-21 **John J. Hartigan Memorial Seminar, American College of Cardiology,** Peter Bent Brigham Hospital, Boston.

Jan. 19-21 **Diabetes in Review: Clinical Conference, American Diabetes Association,** The Mayflower, Washington, D. C.

Jan. 20 **Surgery and Anesthesia in the Elderly Patient, University of Wisconsin and State Medical Society,** University Hospitals, Madison.

Jan. 20-21 **Advances in Obstetrics and Gynecology,** Dept. of Continuing Education, University of Nebraska College of Medicine, Eppley Cancer Institute, Omaha.

Jan. 20-22 **Postgraduate Course in Unresolved Problems in Cardiology, American College of Cardiology,** Mount Sinai Hospital, Miami Beach.

Jan. 20-22 **Southwest Allergy Forum,** Plaza Motor Hotel, El Paso, Texas.

Jan. 21-22 **Orthopaedic Research Society,** Palmer House, Chicago.

Jan. 21-22 **American Society for Surgery of the Hand,** Palmer House, Chicago.

Jan. 22-23 **Clinical Meeting, Florida Dermatological Society,** Belleview-Biltmore Hotel, Belleview.

Jan. 24-26 **30th Annual Session of the International Medical Assembly of Southwest Texas,** Granada Hotel, San Antonio.

Jan. 24-28 **What's New in the Diagnosis and Treatment of Cardiovascular and Pulmonary Diseases, American College of Chest Physicians,** Fontainebleau Hotel, Miami Beach.

Jan. 26-27 **American Group Psychotherapy Association, Inc.,** Bellevue-Stratford Hotel, Philadelphia.

Jan. 28-29 **9th Annual Cardiac Symposium, Arizona Heart Association,** Del Webb TowneHouse, Phoenix.

Jan. 28-30 **Southern Radiological Conference,** Grand Hotel, Point Clear, Alabama.

Jan. 29-30 **8th Annual Cardiovascular Seminar of the Hillsborough County and Suncoast Heart Association,** Curtis Hixon Convention Center, Tampa.

Jan. 31-Feb. 2 **Second ACS Sectional Meeting, American College of Surgeons,** Shamrock Hilton Hotel, Houston.

Feb. 2-3 **Seminar on Arthritis and Skeletal Injuries,** Hammack Auditorium, Menorah Medical Center, Kansas City, Missouri.

Feb. 2-6 **American College of Cardiology,** Conrad Hilton Hotel, Chicago.

Feb. 3-9 **Annual Congress on Medical Education,** Palmer House, Chicago.

Feb. 6-11 **10th Annual Mid-Winter Medical Conference,** Boyne Mountain, Michigan.

Feb. 6-13 **Canadian-American Medical Dental Ski Association** (CAMDSA), The Lodge at Vail, Colorado.

Feb. 7-10 **Postgraduate Course in Current Concepts of Infectious Diseases, American College of Physicians,** McClellan Hall, Jefferson Medical College, Philadelphia.

Feb. 9-11 **American Academy of Occupational Medicine,** Bellevue-Stratford Hotel, Philadelphia.

Feb. 14-17 **160th Annual Convention, Medical Society of the State of New York,** The Americana, New York City.

Feb. 14-18 **Clinical Application of Cardiopulmonary Physiology, American College of Chest Physicians,** Ambassador Hotel, Los Angeles.

Feb. 14-19 **Medical Genetics, American College of Physicians,** Johns Hopkins University School of Medicine, Baltimore.

Feb. 16 **Special Dermatological and E.E.N.T. Problems of the Elderly Patient, University of Wisconsin and State Medical Society,** University Hospitals, Madison.

Feb. 16-17 **Second National Voluntary Health Conference,** Continental Plaza Hotel, Chicago.

Feb. 21-23 **22nd Annual Meeting, American Academy of Allergy,** Americana Hotel, New York.

Feb. 21-25 **Postgraduate Course, Cancer for the Internist, American College of Physicians,** Presbyterian-St. Luke's Hospital, Chicago.

Feb. 24-26 **Postgraduate Course on Operable Heart Disease,** Mayo Clinic, Rochester.

Feb. 25 **Disaster Medical Care Regional Meeting,** St. Francis Hotel, San Francisco.

Feb. 27-Mar. 4 **40th Congress, International Anesthesia Research Society,** Americana Hotel, Bal Harbour, Fla.

Feb. 28-Mar. 4 **The First Obstetrics & Gynecology Seminar Cruise** (Aboard the *S.S. Ariadne* Cruising the Atlantic and Bahama Waters), Fort Lauderdale.

ABROAD

Jan. 10-13 **Seventh International Symposium on Radioactive Isotopes in Clinical Medicine and Research,** Bad Gastein, Austria.

Jan. 20-22 **World Congress on Diabetes in the Tropics,** Bombay, India.

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THE JOURNAL *Book Shelf*

BOOK REVIEWS

RYPINS' MEDICAL LICENSURE EXAMINATIONS, TENTH EDITION, ed. by *Arthur W. Wright*, M.D. (Philadelphia, J. B. Lippincott Company, 1965. $12.50).

The previous five editions of RYPINS' MEDICAL LICENSURE EXAMINATIONS had been edited by Iowa's own Dr. Walter L. Bierring. For many, many years before his death, he was a leader in the field of medical licensure.

In this Tenth Edition, all of the chapters have been brought up to date, and three chapters—those on microbiology, pharmacology, and preventive medicine and public health—have been almost wholly rewritten. The book is divided into two parts. Part I covers the Basic Medical Sciences, and Part II covers the Clinical Sciences.

The chapter on medical qualifying examinations has been extensively revised, partly by our own Dr. Frank R. Peterson, vice-chairman of the Iowa State Board of Medical Examiners, as a result of a series of "Examination Institutes" conducted during the past eight years by the Federation of State Medical Boards of the United States.

The Tenth Edition presents a compact, precise and orderly review of the several fields of medicine. It should, therefore, interest not only the medical examiner and the examinee, but should enlist the cooperation of the medical educator in the broad field of qualifying examinations and licensure.—*John W. Billingsley*, M.D.

FROM AUSCULTATION TO PHONOCARDIOGRAPHY, by *Aldo A. Luisada*, M.D. (St. Louis, The C. V. Mosby Company, 1965. $17.75).

This book consists of 314 pages of factual, and profusely (195) and exceptionally well illustrated material. It is replete with references to the author's previous endeavors, and in the bibliography, as well, there are some 43 references to his work.

In a chapter dealing with normal heart sounds and their mechanism, the reader learns that heretofore commonly accepted explanations for the heart sounds were oversimplified and are not completely correct.

Excellent chapters deal with the physical principles involved in the transmission of sound, characteristics of the auditory system in man, and the ear and the stethoscope. Lucid and extensive discussions of abnormal heart sounds, including systolic and diastolic snaps, clicks and rubs, inflow-tract flow murmurs, inflow-tract regurgitant murmurs, outflow-tract flow murmurs and outflow-tract regurgitant murmurs, are included, as is a one-page appendix mentioning and illustrating certain artifacts encountered in phonocardiography.

FROM AUSCULTATION TO PHONOCARDIOGRAPHY should be required reading for everyone in internal medicine.—*L. F. Staples*, M.D.

BOOKS RECEIVED

MODERN TREATMENT, Vol. 2, No. 5, TREATMENT OF SKIN DISEASE, edited by *D. Joseph Demis*, M.D., TREATMENT OF CHRONIC DISTURBANCES OF BOWEL FUNCTION, edited by *J. Alfred Rider*, M.D., and *Hugo C. Moeler*, M.D. (New York, Hoeber Books, 1965, $16.00 per year).

GASTROENTEROLOGY, by *Henry L. Bockus*, M.D. (Philadelphia, W. B. Saunders Company, 1965, $30.00).

SYMPOSIUM ON CATARACTS: Transactions of the New Orleans Academy of Ophthalmology (St. Louis, C. V. Mosby Company, 1965, $19.50).

SYMPOSIUM ON THE LENS, by *John E. Harris*, Chairman (St. Louis, C. V. Mosby Company, 1965, $18.50).

VITREORETINAL PATHOLOGY AND SURGERY IN RETINAL DETACHMENT, by *Paul A. Cibis, M.D.* (St. Louis, C. V. Mosby Company, 1965, $20.00).

PARKINSON'S DISEASE, edited by *André Barbeau*, M.D., F.R.C.P., *Lewis J. Doshay*, M.D., Ph.D., and *Ernest A. Spiegel*, M.D. (New York, Grune & Stratton, 1965, $7.75).

THERAPEUTIC RADIOLOGY, by *William T. Moss*, M.D. (St. Louis, C. V. Mosby Company, 1965, $18.75).

CARDIAC EVALUATION IN NORMAL INFANTS, by *Robert F. Ziegler*, M.D. (St. Louis, C. V. Mosby Company, 1965, $12.75).

Laryngology and Bronchoesophagology

The Department of Otolaryngology of the Illinois Eye and Ear Infirmary, and the College of Medicine of the University of Illinois, will conduct a postgraduate course in laryngology and bronchoesophagology, from March 21 through April 2, at the University of Illinois Medical Center, Chicago. It will include visits to a number of Chicago hospitals, and instruction will consist of animal demonstrations and practice, diagnostic and surgical clinics, as well as didactic lectures.

Interested physicians should write to the Department of Otolaryngology, University of Illinois College of Medicine, Post Office Box No. 6998, Chicago 60680. Advance registration is essential.

Refresher Course for the General Practitioner

U. OF I. COLLEGE OF MEDICINE, FEBRUARY 15-18

The annual Refresher Course for the General Practitioner sponsored by the U. of I. College of Medicine and the Iowa Chapter of the American Academy of General Practice will be held in Room E-331 (Medical Amphitheater), University Hospitals, Iowa City, on Tuesday through Friday, February 15-18. The registration fee is $40, or $15.00 for a single day. For members of AAGP, it is $10. The program is accredited for 26 hours by the AAGP.

Physicians are requested to park in the Newton Road Parking Lot. Parking permits are necessary, and are available on request. Advance registration is advisable for those who wish lodging.

Tuesday, February 15

PEDIATRICS

9:10 a.m. "Practical Aspects of Newer Knowledge of Fetal and Neonatal Pharmacology"—J. T. Wilson, M.D.

9:40 a.m. "Current Management of the Respiratory-Distress Syndrome"—Donal Dunphy, M.D.

10:00 a.m. "PKU and Other Screening Tests: Do's and Don'ts"—Gerald Solomons, M.D.

10:20 a.m. "What Happens to Ex-Premies?—the High-Risk Follow-up Program"—G. L. Baker, M.D.

11:00 a.m. SPECIAL GROUP CONFERENCES
Neurology: "Common Mononeuropathies"—M. W. VanAllen, M.D. (Rm. E-331)
Psychiatry: "The Over-Anxious Child"—R. L. Jenkins, M.D. (Psychiatry classroom)
UROLOGY: PEDIATRICS PROBLEMS IN UROLOGY—R. H. Flocks, M.D., R. G. Bunge, M.D., D. A. Culp, M.D., and M. A. Immergut, M.D. (Rm. E-405) Bring your problem cases.)

11:50 a.m. SPECIAL GROUP CONFERENCES
Dermatology: "Office Surgery of Benign Skin Lesions"—C. E. Radcliffe, M.D. (Rm. E-331)
Orthopedics: "Minor Injuries of the Hand"—A. E. Flatt, M.D. (Psychiatry classroom)
Otolaryngology: "Management of Lacerations"—W. C. Huffman, M.D. (Rm. E-405)

12:30 p.m. LUNCH

2:00 p.m. "Practical Scientific and Commercial Advances in Infant Feeding"—L. J. Filer, M.D.

2:45 p.m. "Neurologic Disorders During the Newborn Period"—W. E. Bell, M.D.

3:40 p.m. "Diagnosis and Management of Surgical Emergencies of the Newborn"—R. T. Soper, M.D.

4:10 p.m. "Parenteral-Fluid Therapy for Newborn Infants"—C. E. Nelsen, M.D.

4:30 p.m. QUESTIONS AND ANSWERS

7:30-9:30 p.m. PRESENTATION OF TELEVISION TAPES

Wednesday, February 16

MEDICINE

9:00 a.m. "New Concepts About an Old Disease: Diabetes Mellitus"—D. B. Stone, M.B.

9:20 a.m. "Polycythemia—What It Is, and When and How It Should Be Treated"—Henry E. Hamilton, M.D.

9:50 a.m. THE PROBLEM OF FOOD POISONING—Ian M. Smith, M.D., moderator, W. J. Hausler, Jr., Ph.D., J. S. Hunt, M.D., and S. L. Hendricks, D.V.M.

11:00 a.m. SPECIAL GROUP CONFERENCES
Neurology: "The Management of Vascular Diseases of the Brain"—A. L. Sahs, M.D. (Rm. E-331)
Psychiatry: EMOTIONAL PROBLEMS AND AGING—H. L. Nelson, M.D., and R. G. Stuelke, M.D. (Psychiatry classroom)
Urology: OFFICE UROLOGY—Drs. Flocks, Bunge, Culp and Immergut. Bring your problem cases.

11:50 a.m. SPECIAL GROUP CONFERENCES
Dermatology: "Eczematous Dermatitis of Infants"—R. M. Caplan, M.D. (Rm. E-331)
Otolaryngology: "Dizziness"—Leslie Bernstein, M.B. (Rm. E-305)
Psychiatry: EMOTIONAL PROBLEMS AND AGING—Drs. Nelson and Steulke (Psychiatry classroom)

12:30 p.m. LUNCH

2:00 p.m. "Stereoscopic and Fluorescein Studies of the

Optic Fundus"—W. M. Kirkendall, M.D., and E. L. Allen

2:30 p.m. THE SPELL—ITS DIAGNOSIS AND TREATMENT—E. O. Theilen, M.D., moderator, R. J. Joynt, M.D., and W. E. Bell, M.D.

3:25 p.m. "Is Hyposensitization of Value in the Treatment of the Allergic Patient?"—P. M. Seebohm, M.D.

3:45 p.m. PRACTICAL PROBLEMS IN THE MANAGEMENT OF PATIENTS WITH INCURABLE DISEASE—G. B. Theil, M.D., R. L. Lawton, M.D., and A. S. Norris, M.D.

7:30-9:30 p.m. PRESENTATION OF TELEVISION TAPES

Thursday, February 17

OBSTETRICS AND GYNECOLOGY

9:00 a.m. "What Do I Do Now?"—Obstetrics and Gynecology staff

9:45 a.m. "Abnormal Vaginal Cytology"—W. R. Anderson, M.D.

10:15 a.m. "Diagnosis and Management of Diabetes in Pregnancy"—M. E. Yannone, M.D.

11:00 a.m. SPECIAL GROUP CONFERENCES
Neurology: "Diagnosis and Management of Convulsive Disorders in Adults"—R. W. Fincham, M.D. (Rm. E-331)
Ophthalmology: "Eye Emergencies"—R. C. Watzke, M.D. (Rm. E-405)
Psychiatry: "Marital Problems Redefined"—W. S. Moeller, M.D. (Psychiatry classroom)

11:50 a.m. SPECIAL GROUP CONFERENCES
Dermatology: "Warts and Whatever"—Dr. Caplan (Rm. E-331)
Orthopedics: "Treatment of Forearm Fractures in Children"—R. R. Cooper, M.D. (Psychiatry classroom)
Otolaryngology: "Drug Therapy in Otolaryngology"—W. B. Litton, M.D. (Rm. E-405)

12:30 p.m. LUNCH

2:00 p.m. DIAGNOSIS AND MANAGEMENT OF DYSFUNCTIONAL LABOR
"Recognition of Abnormal Labor Patterns"—L. J. Dunn, M.D.
"Trial of Labor"—C. A. White, M.D.
"When to Stimulate and How"—C. P. Goplerud, M.D.
"Evaluation of Cephalopelvic Disproportion"—R. M. Kretzschmar, M.D.
"The Place of Cesarean Section"—J. P. Jacobs, M.D.

3:15 p.m. "Prevention of Postpartum Hemorrhage"—W. C. Keettel, M.D.

3:40 p.m. MARITAL COUNSELING: AN INCREASING MEDICAL PROBLEM—Dr. Norris, Dr. L. R. Hughes, Dr. Kretzschmar and Dr. Bunge

6:00 p.m. SOCIAL HOUR AND DINNER—University Athletic Club
Speaker: Mr. Oliver Field, AMA Department of Investigation, "The AMA Campaign Against Quackery in Medicine"

Friday, February 18

SURGERY

9:00 a.m. MAMMARY DYSPLASIA: RECOGNITION, USE OF MAMMOGRAPHY, TREATMENT—S. E. Ziffren, M.D., J. M. Layton, M.D., and J. R. Thornbury, M.D.

10:00 a.m. POLYPS OF THE COLON AND RECTUM: DIAGNOSIS AND MANAGEMENT—R. D. Liechty, M.D., and J. M. Layton, M.D.

11:00 a.m. SPECIAL GROUP CONFERENCES
Neurology: "Muscle Disease in Adults"—Dr. Joynt (Rm. E-331)
Ophthalmology: "Problems in Cortisone Therapy"—A. E. Braley, M.D. (Rm. E-405)
Psychiatry: "Management of the Patient With Chronic Back Pain"—Russell Noyes, Jr., M.D. (Psychiatry classroom)

11:50 a.m. SPECIAL GROUP CONFERENCES
Dermatology: "Diagnosis and Treatment of Psoriasis and Seborrheic Dermatitis"—R. G. Carney, M.D. (Rm. E-331)
Otolaryngology: "What's New in Otolaryngology?" Brian F. McCabe, M.D. (Rm. E-405)
Psychiatry: "Office and Home Management of the Depressed Patient"—Paul E. Huston, M.D. (Psychiatry classroom)

12:30 p.m. LUNCH

2:00 p.m. PRURITIS ANI AND ANAL FISSURES—J. A. Gius, M.D., C. E. Radcliffe, M.D., and R. M. Kretzschmar, M.D.

2:45 p.m. ANIMAL BITES—R. T. Soper, M.D., and W. F. McCulloch, D.V.M.

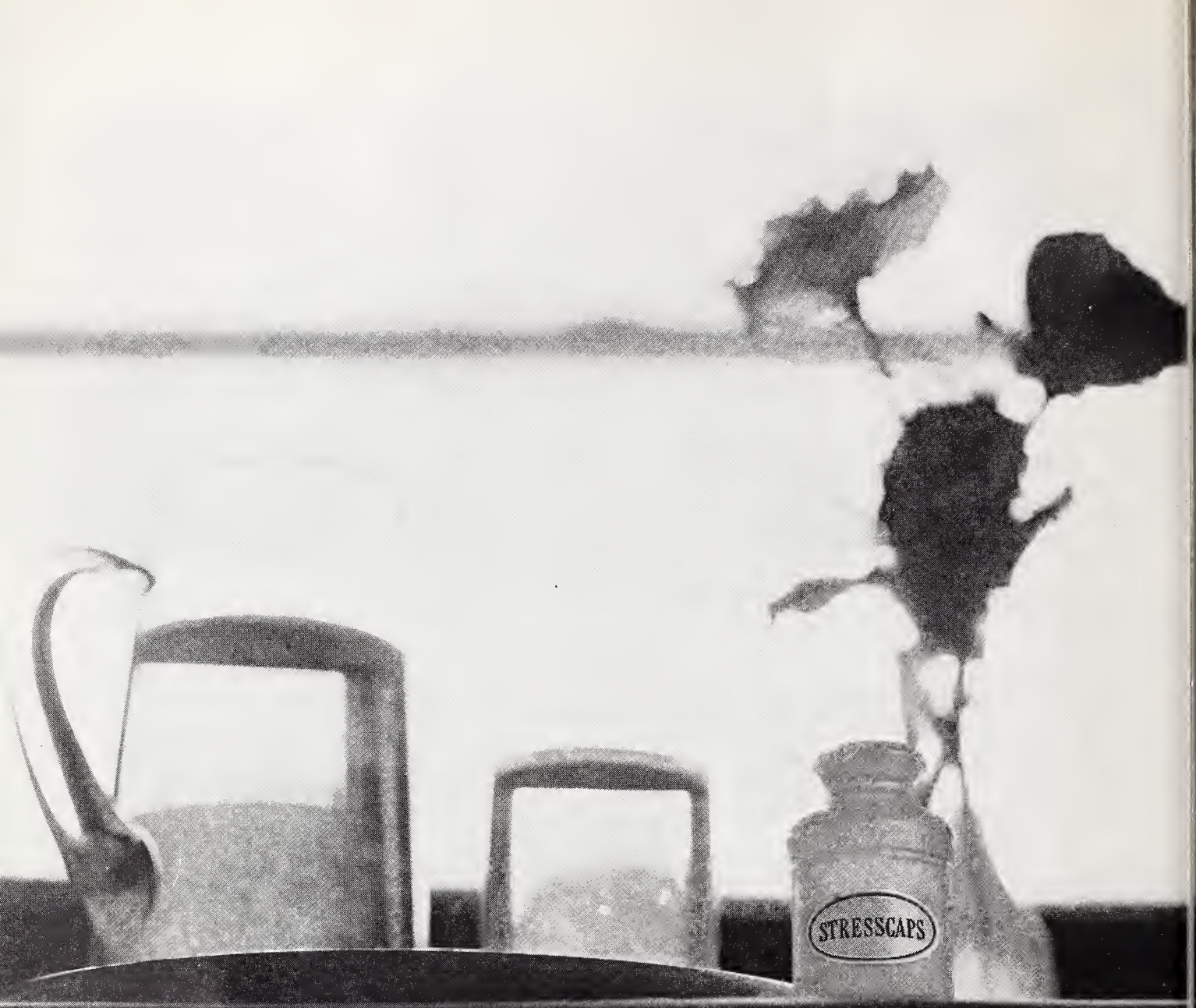
3:30 p.m. "Empyema in Children"—J. B. Flege, M.D.

4:00 p.m. "The Carpal-Tunnel Syndrome"—George E. Perret, M.D.

Mark Your Calendars, Please

The 1966 IMS Annual Meeting will be held at the Hotel Savery (House of Delegates sessions) and the Hotel Ft. Des Moines (scientific sessions, exhibits and banquet)

April 24-27



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THE DOCTOR'S BUSINESS

Tax Savings Via the Short-Term Trust

HOWARD D. BAKER
Waterloo

Even though the Internal Revenue Service has recently taken a firm stand against the use of the short-term (Clifford) trust on such property as medical buildings and equipment, that device still offers attractive tax-saving opportunities if properly used. You can utilize other sorts of income-producing property so as to avoid the Revenue Service's attack on "lease-back" of possessions such as buildings and equipment.

The most logical use for such a trust is to meet financial needs of a personal and non-deductible nature. Transfer of funds to children and support of dependent relatives are the most common of these.

What are the advantages of such a trust? First, it provides for a planned accumulation of funds to meet these needs and prevents their imposing a financial hardship upon you when the need finally materializes. By setting up the short-term trust, you have assured the availability of relatively large sums of money through systematic accumulation over a period of years.

Secondly, you make yourself eligible for substantial tax savings. Through income tax savings, the Treasury Department will contribute generously to the accumulation of your trust.

To illustrate the tax-saving feature, let us assume that you are in a 48 per cent federal income tax bracket, and that you have three children for whom you wish to accumulate $15,000. To accumulate $15,000 over the required *10-year minimum* period of the trust will require earnings of $1,500 annually. If you have rental property, a farm, cash or securities adequate to produce $1,500 annual income, the short-term trust may be a very logical approach to your problem. The annual accumulation of $1,500 will accrue to each of the three children at the rate of $500 each. Since this income is diverted from your tax return, you will save $720 (48 per cent of $1,500), or $7,200 over the 10-year period. The over-all result of the trust is that $15,000 of educational funds is accumulated in the names of your three children by means of $7,800 from your funds and $7,200 from tax savings. If each child's annual $500 share of the income is distributed and reinvested, it too will earn additional income, thus increasing the available funds. At the end of the 10-year period, the property or securities in the trust will revert to your ownership, and the trust will cease to function.

What better way is there to secure a 48 per cent return?

The two major requirements of the short-term trust are that it must be created for a *minimum period of 10 years,* and that it must be *absolutely irrevocable.* The trust agreement and related instruments should be handled by an attorney experienced in trusts, for while the trust is relatively simple, failure to qualify it properly could result in the loss of your tax advantage.

There is a gift-tax consideration involved in such a trust. The valuation of a 10-year gift of the right to income from property is approximately 30 per cent of the market value of the property at the time of the gift. In the preceding example, if the current market value of the property were $30,000, the gift valuation would be approximately $9,000. This amount divided among three donees would not even use up the annual exemption allowed for gifts.

Although such a trust is certainly not the answer to all financial planning problems, it does provide an avenue of tax planning that may fit your individual circumstances. If you are interested, it will be worthwhile for you to consult your attorney in regard to the use of the short-term trust.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was a agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Iowa Association of Medical Assistants

How's Your Vocabulary?

Each of us has three vocabularies—her *active* or speaking vocabulary, consisting of the words she uses daily in speaking; her *writing* vocabulary, which is essentially the same except that it also contains a few words that she does not use continually in conversation; and her *recognition* vocabulary. The last of these, which is by far the largest, is often called the *potential* vocabulary. It contains words that she reads and hears, and partially understands, but does not use in her writing or speaking.

Transferring words from our potential to our active vocabularies requires effort, but it is the best way for us to improve our storehouses of words. Then, we can discard words which are neither precise nor effective, and add words which will more efficiently express what we have in mind. That is the second step toward improvement.

The third step is to learn proper diction and spelling, and it brings us to my real reason for writing this article. How does one tell when to use "able" and when to use "ible" in word endings?

Harry Shaw in ERRORS IN ENGLISH AND WAYS TO CORRECT THEM, a paper-bound text published by Barnes & Noble, 1962, gives the following *usual* rules:

Use ABLE if:

1. The base (root) is a complete word: *tax* plus-*able* —*taxable*
2. The base is a complete word lacking a final *e*: *desire* plus-*able*—*desirable*
3. The base ends in *i* or *y*: *rely* plus-*able*—*reliable*
4. The base has other forms with the sound of long *a*: *demonstrate*—*demonstrable, irritate*—*irritable*
5. The base ends on hard c (cat) or hard *g* (get): *applicable, navigable*

Use IBLE if:

1. The base is not a complete word: *poss* plus-*ible*—*possible*
2. The base ends in *ns*: *respons* plus-*ible*—*responsible* (Note that these words usually end in *e* but the *ns* is the clue)
3. The base ends in *miss*: *dismissible, omissible*
4. *-Ion* can be added to the base without intervening letters: *collect* plus-*ion*—*collectible*
5. The base ends in soft c (force) or soft *g* (*j* sound, *tangent*), and the roots are not always complete words: *forcible, legible*

Please note that we say USUAL rules—there are exceptions to most rules!

Perhaps less difficult to solve is the question of when to use *ie* and *ei*. In school we were taught this little verse:

If the letter c you spy
Place the *e* before the *i;*
If you do not spy a c
Place the *i* before the *e.*

Mr. Shaw offers this verse:

Write *i* before *e*
Except after *c*
Or when sounded like *a*
As in *neighbor* or *weigh.*

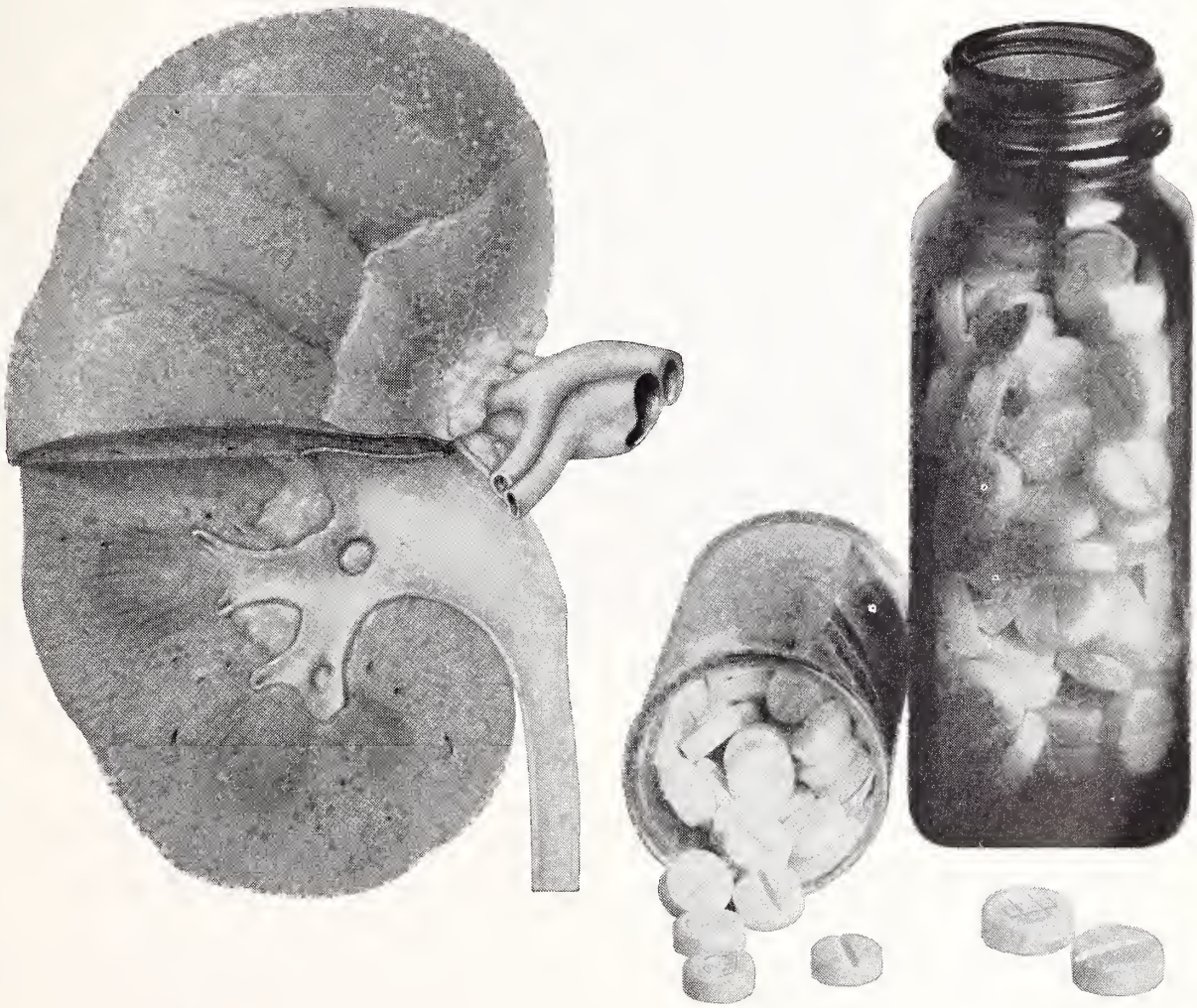
The third difficulty in writing correctly involves the use of the apostrophe. The apostrophe has several uses, and when omitted or used improperly it causes misspelling even though it is not a letter but a sign. Its use influences both punctuation and spelling as follows:

1. Use with an *s* to form the possessive of a noun not ending in s: *doctor's*
2. Use alone to form the possessive of a plural noun ending in *s*: *doctors'*
3. Use alone or with *s* to form the possessive of singular nouns ending in *s*: *Browns'* or *Browns's*
4. Use to indicate that figures or letters have been omitted: *wasn't, it's, '65*
5. Never use to form the possessive *its,* or with definite pronouns such as *hers, ours.* Use in the possessive or indefinite pronouns: *one's, another's*
6. With an *s* to the last last member of a group to indicate joint possession: *Johnson & Johnson's tapes*
7. To the last member of a compound: *somebody else's*
8. To indicate the plural of figures, letters or words: *cross your t's and dot your i's; he won his fame in the 1960's*

We doubt that there is a medical office that does not include a medical dictionary and a standard English dictionary in its library. Does yours also include some publication devoted to proper English usage and the mechanics of spelling and punctuation? If not, add one to your shelf. You'll find it most useful.

—Helen G. Hughes

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

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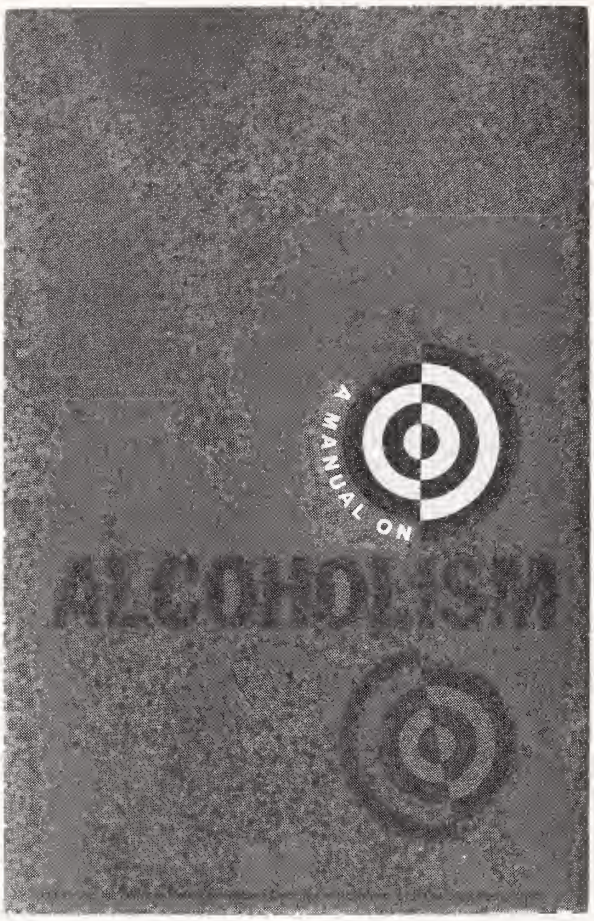
where today's theory is tomorrow's therapy

F R E E



F R E E

FOR THE ASKING!

This is the AMA's Manual on Alcoholism. A copy (priced at $1.50) will be sent free if you will fill out and mail the coupon below.

Iowa has 50,000 compulsive drinkers. Often the physician's advice is the "authoritative voice" this man or woman will listen to. Your opinion can be the first knowledgeable opinion he, or she, has had a chance to act upon.

The decision to stop drinking and attend a weekly therapy group is frequently made because of the doctor's suggestion. Experience is proving that "Doctor's Orders" are likely to be followed.

Commission on Alcoholism
Iowa State Department of Health
State Office Building
Des Moines, Iowa.

Please send free copy of AMA's Manual on Alcoholism.

Name .....

Address ..... City ..... State .....

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

New Year—1966

The "Old Year" 1965 is nearly gone, and with it the experiences, hopes, aspirations and frustrations of all who lived it. Overall, it was a good year, and from the point of view of the staff of the Health Department, a reasonably satisfactory one. Especially pleasing has been the evidence of confidence, interest and cooperation demonstrated by our colleagues and co-workers in health activities throughout the state. For these, we are thankful. In the New Year 1966 there will be plans, hopes and challenges which will again require the concerted efforts of all Iowans with a sincere interest in the development and conduct of adequate health programs in the state. We are confident of your continued and enthusiastic support.

With past accomplishments and future requirements in mind, and speaking for the staff of the State Department of Health, it is my real privilege and pleasure to extend to all of you sincere best wishes for a very Happy and Successful New Year.

Arthur P. Long, M.D., Dr. P.H.

Reporting of Communicable and Infectious Diseases

Iowa State Department of Health Rules and Regulations state that "every physician and nurse and the parents, guardian, schoolteacher or householder where a case of communicable or reportable disease exists, shall report the case." The regulations further state that these reports may be sent to the office of the city clerk or to the city health officer, who shall keep a permanent record of them, and that cases may be reported to these officials by telephone, by card or by personal communication. These reports are to be forwarded to the State Department of Health. They may be mailed directly, or mailed to the regional health office, which in turn sends them to the State Department of Health. Additionally, there is a requirement that reports of cases of tuberculosis and venereal disease must be mailed in sealed envelopes. Other diseases may be reported by postcard.

In any area, city or county in which the city clerk or the health officer has not arranged for diseases to be reported to his office, physicians may report directly to the regional health office or to the State Department of Health.

The State Department of Health has special forms for reporting these diseases. Physicians may obtain cards for reporting them either from their local health department, from the regional health office, or directly from the State Department of Health in Des Moines. In Iowa, a white card is used for reporting tuberculosis cases, an IBM type of card for reporting venereal disease, and a buff colored card for reporting any other infection.

In cases of a severe type of communicable disease, such as meningococcal meningitis, poliomyelitis, typhoid fever, diphtheria and early infectious syphilis, immediate reporting is requested either from the physician or from the local health department. While certain diseases are named here, other diseases, such as infectious hepatitis, may at times present special problems. These too, should be reported by telephone either to the regional or the state office.

Diseases that are less severe in nature and of which the State Department of Health does not ordinarily make investigations, such as scarlet fever, mumps, measles, erythema infectiosum, etc., may be reported on a weekly basis. One card may be used to report a number of cases and several different diseases. For example, a report for a city or town or from an individual physician, for the week ending ————————, might carry an entry such as: 10 cases chickenpox, 8 cases German measles, 3 cases ringworm of the scalp. Since infectious hepatitis is reported by age groups, physicians should report these cases giving the number of patients under 20 years of age and the number over 20 years of age.

Although food-borne diseases frequently are non-communicable, these also should be reported promptly, preferably by telephone. This promptness is necessary because early notification of an outbreak of this kind permits investigative work that is often impossible if the report has been delayed.

The communicable disease case report card is not designed to give all the information that the State Department of Health may want regarding a patient or a problem. However, it does alert the Department and gives it an opportunity to obtain

the necessary information and materials with which to start an investigation.

Whenever the State Department of Health or its regional office personnel feel it is necessary to investigate any disease, the local health officer and the patient's physician are notified. Any necessary interviewing of patients is done later, after discussion with all physicians concerned.

The following is a list of the regional health offices to which reference has been made:

REGIONAL HEALTH SERVICE NO. 1 Box 70, Manchester, Iowa, Telephone: WA 7-4362

REGIONAL HEALTH SERVICE NO. 2, 1104 First Avenue North, Fort Dodge, Iowa, Telephone: 573-8201

REGIONAL HEALTH SERVICE NO. 2B, Box 1196, Mason City, Iowa, Telephone: 424-4073

REGIONAL HEALTH SERVICE NO. 3, City Hall, Spencer, Iowa, Telephone: 262-4177

REGIONAL HEALTH SERVICE NO. 4, 35 North Main Street, Council Bluffs, Iowa, Telephone: 322-7880

REGIONAL HEALTH SERVICE No. 5, E. 7th & Court Street, Des Moines, Iowa, Telephone: 281-5264

REGIONAL HEALTH SERVICE NO. 6, Box 149, Washington, Iowa, Telephone: OL 3-3442

NOTIFIABLE DISEASES IN IOWA

Actinomycosis
Anthrax
Ascariasis

Botulism
Brucellosis (Undulant fever)

Cat scratch fever
Chickenpox (Varicella)
Cholera
Coccidioidomycosis (Coccidioidal granuloma, "Valley fever")
Conjunctivitis, acute infectious (of the newborn, not including trachoma)
Coxsackie virus

Diphtheria
Dysentery, amebic (Amebiasis)
Dysentery, bacillary (Shigellosis)

ECHO virus
Encephalitis, infectious (lethargic and nonlethargic)
Erythema infectiosum

Filariasis (Mumu)
Food infections and poisonings

German measles (Rubella)
Glanders
Gonorrhea

Hepatitis, infectious (acute catarrhal jaundice)
Histoplasmosis
Hookworm disease

Impetigo contagiosa
Influenza

Kerato conjunctivitis, infectious (Superficial punctate keratitis, numular keratitis)

Leprosy
Leptospirosis
Lymphogranuloma venereum (Inguinale) and climatic bubo

Malaria
Measles (Rubeola)
Meningococcal meningitis (Cerebrospinal fever)
Mumps (Infectious parotitis)

Pediculosis (Lousiness)
Plague, bubonic, septicemic, pneumonic
Pneumonia, acute lobar
Poliomyelitis
Psittacosis

Rabies
Rat-bite fever (Sodoku)
Relapsing fever
Rheumatic fever
Ringworm
Rocky Mountain spotted fever

Salmonellosis
Scabies
Shigellosis
Streptococcal infections (including Scarlet fever)
Schistosomiasis
Smallpox (Variola)
Syphilis

Tetanus
Trachoma
Trichinosis
Tuberculosis
Tularemia
Typhoid fever
Typhus fever

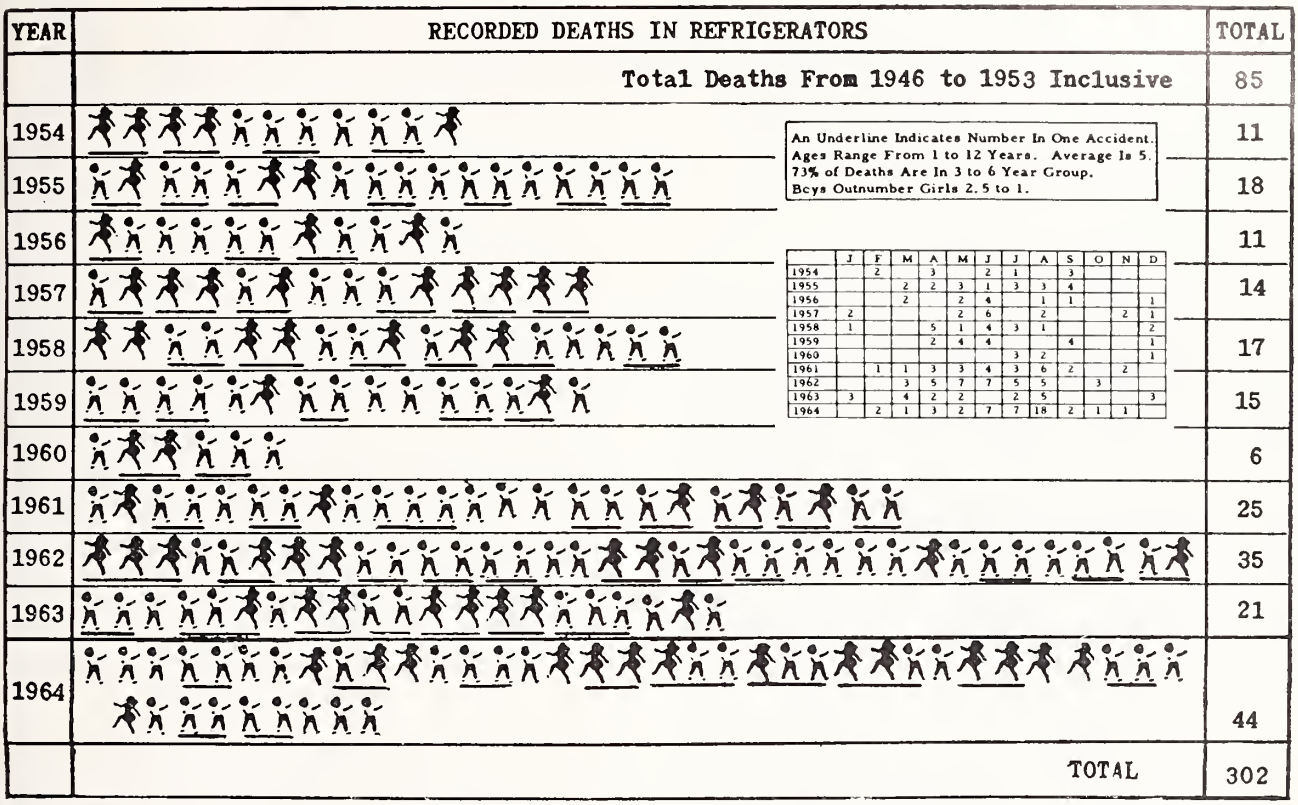
Whooping cough (Pertussis)

Yellow fever

Morbidity Report for Month of November, 1965

Diseases	1965 Nov.	1965 Oct.	1964 Nov.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	386	275	282	Franklin, Humboldt, Johnson
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	98	43	39	Hamilton
Whooping cough	1	0	4	Dickinson
Brucellosis	4	4	11	Dubuque
Chickenpox	508	144	507	Dubuque, Hamilton, Polk, Scott
Meningococcal meningitis	0	4	1	
Mumps	143	64	236	Kossuth, Polk, Winnebago
Poliomyelitis	0	1	0	
Infectious hepatitis	25	23	56	Floyd, Harrison, Palo Alto
Rabies in animals	11	17	25	Sac
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	31	27	27	For the State
Syphilis	71	87	59	For the State
Gonorrhea	226	254	224	For the State
Histoplasmosis	0	2	2	
Food intoxication	0	0	13	
Meningitis (type unspec.)	1	2	3	Woodbury
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	7	0	Jackson, Polk
Salmonellosis	8	7	9	Polk
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	3	1	
H. influenzal meningitis	1	1	0	Polk
Amebiasis	0	3	1	
Shigellosis	1	7	3	Pottawattamie
Influenza	0	0	0	

THE CHART TELLS THE TRAGIC STORY *



*From Refrigeration Service Engineers Society, 433 North Waller Avenue, Chicago 60644.

SR Foundation to Help Build Mental Health Centers

The Medical Advisory Board of the Sears-Roebuck Foundation has approved extending its Community Medical Assistance Program to the mental health field. Heretofore, the SR Foundation has helped small communities find out whether they can support doctors of medicine, and if so, has helped them raise funds for and construct doctors' office buildings.

The new program will be a cooperative effort involving the American Medical Association and the United States Junior Chamber of Commerce.

These organizations and the federal government see a great need for community outpatient diagnostic and treatment facilities to provide 24-hour care for mental patients. They would serve as primary centers in diagnosis, and as follow-up units for patients who have been released from specialized mental hospitals or, for that matter, from the psychiatric wards of general hospitals, but who still need supervisory care. These facilities. it is thought, should serve trade areas having populations between 50,000 and 100,000.

The program will provide advice, guidance and technical know-how to urban communities, just as the SR Foundation's past program has done for villages seeking general practitioners.

AVAILABLE FROM THE STATE DEPARTMENT OF HEALTH

For venereal disease control
- Procaine penicillin (aqueous or oil suspension)
- Benzathine penicillin G (Bicillin)
- Achromycin (250 mg. capsules)

Immunizing agents
- Triple toxoid
- Diphtheria-tetanus toxoid (Combined, absorbed or precipitated—Adult type)
- Salk and Sabin poliomyelitis vaccines
- Typhoid vaccine triple (Typhoid, para A and para B)
- Smallpox vaccine

Rabies control materials
- Duck embryo anti-rabies vaccine
- Anti-rabies serum

Histoplasmin

Snake anti-venom (kept at poison center and sub-centers)

Gamma globulin (for protection of people exposed to measles, German measles, or infectious hepatitis, if the risk is sufficiently great)

For detailed information, see the April, 1965, JOURNAL, *pages 225-227, or telephone the Department.*

Woman's Auxiliary News

Traffic-Safety Meeting

The Women's Traffic Safety Conference was held at Hotel Savery November 29 and 30 and I am reporting on the November 30 session. It was opened by Mr. Ivan Eland, professor and director of Safety Education at State College of Iowa, Cedar Falls. He thinks we need to start our safety education at the pre-school level, and continue to practice good safety habits all our lives. Again and again, he stressed repetition of what was learned in the previous grade before proceeding with the new points each year. He passed out a program for safety education from kindergarten through junior high school. This outline will be available from the Auxiliary's Safety Chairman.

With the development of super highways and the constantly increasing volume of highway traffic, all drivers have a need for increasing their knowledge and improving their skills so as to keep pace with complex driving situations and changing traffic patterns.

Mr. Ted Doyle, program director of radio-TV station WHO, said that the most important requisite when contacting communication media is to come with a concrete plan of action and present it —to ask for help where necessary—and to keep the information current at a local level. In safety campaigns, he feels that the product offered for sale is a good one, but that it should be given a fresh presentation. People are tired of old clichés, and new ones are needed if it is to get their attention. For an indefinite time there will be a Safety Program on WHO every Friday at 6:30 p.m.

The speaker on seat belts was Mr. John T. Dunlavy, from the American Seat Belt Council. In Iowa only 55 of the 990 persons fatally injured were wearing seat belts. This shows the poorest possible recognition of their life-saving potential. Do you understand seat belts' function? They are a restraining device, and can absorb forces which the body cannot. What happens to you in an accident? At sixty miles an hour you are travelling 88 feet per second, and on impact there are 6,000 pounds of force. You must realize that you are part of group dynamics and you must learn the measures that can save your life.

There is a folder with complete information on this conference available at the State Office.

—Frances Hines (Mrs. Ralph E.)

Foreign-Policy Conference

A Regional Foreign Policy Conference was held at Hotel Fort Des Moines on November 19, 1965, sponsored jointly by the United States Department of State and the Junior Leagues of Iowa, in cooperation with about 30 other organizations. Although it was the twenty-first in a series of State Department regional conferences, it was the first one to be held in Iowa. The object of these regional conferences is to explore in depth, and to exchange views on matters of current import in world affairs.

During the morning session, Mr. Walter J. Stoessel, Jr. talked of Russian Policy. He stressed that Kremlin policy-making is a "difficult and complicated process" because of the collective leadership that has replaced Khrushchev, and he expressed the opinion that U. S.-Soviet relations are in a "down-cycle" primarily because of the Vietnamese war. Russia is experimenting, he said, with procedures that "sound suspiciously like capitalism" in an effort to balance the economic requirements of agriculture, space, industry and military programs.

Mr. David H. Popper reviewed the United Nations' actions in various parts of the world, and said, "The habit of co-operation among members of the U. N. is developing conciliation procedures so that operations desired by all will be undertaken with the agreement of the most members." Several questions from the audience dealt with the admission of Red China to the U. N., and he noted that the vote margin continues to narrow. He feels, however, that it would be "illogical and mistaken" to admit Communist China to the United Nations.

The luncheon speaker was Mr. U. Alexis Johnson, deputy undersecretary of state for political affairs. He foresaw a "difficult, dirty and hard struggle" before peace can be restored in war torn South Viet Nam, and declared that the choice as to whether its length will be long or short is up to Hanoi. He ended his remarks by saying, "It takes two to make peace, unless one is defeated."

During the afternoon session, Mr. Bartlett Harvey, deputy assistant administrator for program, of the Agency for International Development, touched briefly on assistance programs around the world. One of the more successful programs is the Point-Four Program inaugurated by President Truman. It deals mostly with technical

assistance. Our general aim is to make each country self-supporting, and that is just what the Marshall Plan did for Europe. In Latin America and Asia, however, the problems seem to be multiplying, and it will be many years before we can expect to see many concrete results.

Mr. Alvin Friedman, deputy assistant secretary of defense for international security affairs, opened his remarks with a quote from President Kennedy: "Let us call a truce to terror." He then reviewed the past 20 years in Southeast Asia, and stated that the coals of war were laid by mistakes in policy by many countries—France and England, as well as the United States. He feels that eventually peace will come, but that it will be a long time after the fighting stops before any kind of stability can be maintained.

If anyone is interested in looking at the many good pamphlets I was given, please contact me and I will be happy to share them.

—FRANCES HINES (MRS. RALPH E.)

The International Congress of Homehelp Services

The International Congress of Homehelp Services was held at Konegstein/Taunus, Federal Republic of Germany, September 8-11. Konegstein is a beautiful mountain village about 15 miles from Frankfurt.

The organization has an interesting history. In 1952, England invited representatives of European countries having home-help services to attend the British national congress in London. There the first discussions were held which were to lead to the establishment of an international organization.

In 1953, Paris discussions followed those in London. In 1956 the meeting was again held in England. At the same time, relations were being established among the directors of European services. Their common experiences and the unique features of their respective problems were discussed, and the conviction grew that an international organization was needed.

The first international conference was held in May, 1959, in The Netherlands. It was at the conclusion of that international conference that the International Council of Homehelp Services (I.C.H.S.), was established, and the services in some 20 countries are now members of it.

The Paris Congress in 1962 was the first general meeting of the directors of such services—including four from the United States, one of whom was Mrs. Grace Bell, of the National Committee of Homemaker Service.

The I.C.H.S. has as its aim the development of home-help services throughout the world. It hopes to attain this aim in the following manner:

1. By creating good relations between organizations of home-help services in the different countries.

2. By studying questions relevant to the home-help service.

3. By the exchange of views having to do with the problems of this service.

4. By organizing congresses, conferences and meetings.

5. By obtaining information from the different countries, doing research and publishing the results.

6. By reciprocal visits between the home-help workers and home-help organizers of the different countries.

7. To give to each country where there is a home-help service a central address to which information can be sent or from which it can be obtained.

In the United States, the central address is: National Council for Homemaker Services, 1790 Broadway, New York City. The Des Moines-Polk County Home-care Homemaker Service is a member of the National Council.

The meeting at Konegstein was opened on Wednesday, September 8, by Miss E. Carnegy-Arbuthnott, president of the I.C.H.S. All reports were presented simultaneously in French, German and English.

On Thursday, I heard Mlle. Collette Faisse, of Paris, report on "Working Conditions of Homehelp." Mrs. Laura Nepean-Gubbins, of London, reported on "The Task of the Homehelp Organizer and the Required Training." Although both of those papers were extremely interesting and well presented, they contained little that could be related to our services. The European services are much more complex, and the training period for homemakers is much longer—in many instances as long as three years.

Dr. C. Blankestejn, of The Hague, director of the mental health organization of the Dutch Reformed Church, reported on "Collaboration of Homehelp Services with Other Social and Health Organizations." He emphasized many points that are stressed in our own service, such as the importance of cooperation between homemaker and physician, and the benefits to be derived from agencies, physicians, social workers, family and homemakers' working as a medical team. Some other familiar points were that the role of the homemaker is to teach the family members to help themselves, and that it is always best for families to solve their own problems. Dr. Blankestejn recomended that all programs be standardized as much as possible, and that international standards should be established.

In the afternoon I attended a group discussion concerned with the training of home-help. It was a most unusual experience, since Miss Kennedy, of Catholic Charities, San Francisco, and I were the only Americans, and the languages spoken were French and German. The European participants

were very kind, and did their best to interpret for us.

As far as I could understand, the main differences between European and American home-help administrators are the length of training time and the very definite professional status that they attain upon completing the course. A shorter course is given for "helpers," but even that is three months.

We heard reports from many cities in Germany, Austria, Belgium, Holland, Sweden, France and England. Once again because of the language barrier, it was difficult for me to follow. Except for the training time, it seems we all had similar overall concepts of the home-help services. It was interesting to hear translated back to us many of the principles that we had heard over and over:

1. Having a well-trained director is very important. The director should visit each case before assignment. Proper placement is important.

2. Specialized training is valuable after good fundamental training.

3. The function of the home-help organization is to give temporary help so as to bridge the gap until another solution is found. In this connection a familiar question arose—"Should there be a time limit, and where and how should it be fixed?"

4. Homemakers are not domestics, nurses or social workers. Because of their training they are homemakers, and as such should be able to work alongside and cooperate with other professional workers.

One unique problem we heard discussed at great length was whether or not it is possible to give the same training to village home-helps and city home-helps. Village home-helps must be trained to take the place of a farmer's wife in the household. Her duties include helping with the farm work, milking cows, taking care of chickens, etc., to say nothing of caring for the family.

There were many home-helps attending the conference. They seemed to be acting as pages, giving directions, and being generally helpful. The ones I saw were wearing uniforms similar to those of our student nurses—blue and white striped uniforms, white bib aprons and white caps. Uniforms vary from country to country.

Some of the countries represented at the conference were: Australia, Austra, Belgium, Canada, Denmark, England, Finland, France, Germany, Israel, Italy, Netherlands, Norway, Sweden, Switzerland, Spain, and United States.

—MRS. ALLAN PHILLIPS
Chairman, Advisory Committee,
Des Moines-Polk County Home-Care
Homemaker Service

Center traffic lane lines on two-way streets are solid. Center lines on one-way streets are broken.

Volunteer Health Service Award

Since the State Auxiliary's meeting is to be held April 24-27, it is time for each county Auxiliary to select its candidate for this award. Be sure you consider candidates qualified in the fields of physical health, mental health, and/or health-education service in Iowa.

Since the founding of this award in 1956, the following have been recognized:

1956 Mrs. C. C. Inman, Bancroft
1957 Mrs. Read Arthur, Clarinda
1958 Mrs. Maurice L. Northup, Des Moines
1959 Mrs. A. M. Davis, Sioux City
1960 Mrs. Dan W. Figgins, Des Moines
1961 Mrs. Cliff Millen, Des Moines
1962 Mrs. Harold E. Jacobsen, Sioux City
1963 Mrs. George Comfort, Des Moines and Mrs. Paul Stump, Oskaloosa
1964 Mrs. Elliott R. McDonald, Davenport
1965 Mrs. Vern C. Schroeder, Des Moines

Why not have your county represented, and perhaps the winner, this year?

—MRS. OLIN A. ELLIOTT, *Chairman*

Essay Contest

The 20th Annual Essay Contest of the Association of American Physicians and Surgeons is now underway, and spokesmen announce a March 1, 1966, deadline for students desiring to submit material for consideration. The Woman's Auxiliary to the Iowa Medical Society is sponsoring the contest in Iowa.

Essays must be at least 1,000 words, and none containing more than 1,500 words will be considered. Contest entrants may write essays in longhand, although typing is preferred because of clarity.

Additional information concerning the 1965-66 contest may be obtained from family doctors, or by writing to Essay Contest Chairman, Woman's Auxiliary, 529—36th Street, Des Moines, Iowa 50312.

Essays for this contest must be written on either of two subjects, "The Advantages of Private Medical Care," or "The Advantage of the American Free Enterprise System," and a winner will be picked from either category.

Packaged libraries containing contest rules, instructions and reference materials have been mailed to the president or essay contest chairman in each organized Auxiliary.

Three prizes are offered at the state level by the Iowa Medical Society: $100 first prize, $50 second prize, and $25 third prize. At the national level, 14 prizes range from $1,000 to $75.

Have you asked your schools to participate in this essay contest?

Getting Acquainted With . . .

Mrs. Phillip H. Tenney (Sue)

Buchanan County President

The University of Illinois awarded Sue the Bachelor of Science degree in nutrition and dietetics in 1944. Following that, she worked in the quartitalia kitchen at Presbyterian Hospital, in Chicago, for about a year. Then she was in the control laboratory of Libby, McNeil and Libby, at Blue Island, Illinois, for three years.

The next eight years she spent in Montana, where her husband was in the solo practice of medicine. Many experiences which will always stand out in her memory occurred during that time.

Her husband's return to active Army duty and postgraduate study took the Tenneys to Kansas, Illinois, Tennessee, Louisiana and Washington, D. C. They moved to Iowa in 1963, where her husband is a psychiatrist at the Mental Health Institute at Independence. They have two boys, 18 and 9 years old, and a 14-year-old girl. Since they are natives of Illinois, Sue says they feel that they are back home again in Iowa.

Mrs. Marvin O. Larson (Edith)

Sioux County President

A native Iowan, Edith was graduated from Hawarden High School, attended State Teachers College in Cedar Falls, and taught school for 10 years before marrying.

Since she works full time for her husband, her time for outside activities is somewhat limited, but she is serving on the Board of the Hawarden United Fund, is a member of the Methodist Church and of its choir, a member and past-matron of The Order of Eastern Star, past president of Chapter EM, P.E.O. and a member of her city's Women's Club.

She enjoys relaxing at bridge, and does a bit of knitting. Vacations, she spends boating and fishing with her husband.

News From Around the Hawkeye State

Marion County

Fourteen members of the Marion County Medical Auxiliary were entertained, for their November meeting, in the home of Mrs. Clara Nicholson, of Des Moines, a former Knoxville resident. The president, Mrs. Robert McClung, of Knoxville, presided.

Palo Alto County

The Palo Alto County Medical Auxiliary has been very busy with preparations for the opening of the new million-dollar county hospital. On Saturday evening, October 23, the group served coffee and cookies to members of the professions which included doctors and their wives, dentists and wives, pharmacists and wives, and all nurses of the county and surrounding towns and cities.

The local group also plans to work in the snack bar of the new hospital where coffee, soft drinks and baked goods will be sold.

Some members helped man the "Iowa Home Bound Handcraft Sales" booth at the Spencer Fair this fall.

Our members are proud of the fact that Emmetsburg now has three schools for retarded children, and they have helped with the establishment of these schools.

Our members also have been interested in the "Foreign Exchange Student" program. We have donated funds for this project, and Dr. and Mrs. Moore kept a student from Italy in their home.

The Palo Alto Auxiliary started a Future Nurses Club about six years ago, and it now has 40 members. Its name has been changed to "Allied Services Club," since it encourages young people to choose careers in health fields as well as technical branches. Each spring we honor the mothers of the members of that organization at a tea. Pins are given out at that time to those who have merited them, and our Auxiliary pays for them.

MRS. H. L. BRERETON

Pottawattamie County

In September, the Auxiliary held an organizational brunch meeting at a member's home in the country. The year's program was planned and AMA-ERF Christmas cards were examined.

A local physician gave a very informative talk on mental health at the October meeting.

On November 3, our county was hostess for the District XI meeting. Physicians wives from the nine southwest Iowa counties met at the Council Bluffs Country Club, overlooking the shores of Lake Manawa. Rural Health was represented by a demonstration on a health related topic by 4-H girls. The state officers and state committee chairmen in attendance shared information they had received at the National Auxiliary workshops in Chicago.

MRS. E. B. MATHIASEN, *President*

Scott County

In October, members of the Woman's Auxiliary to the Scott County Medical Society met for luncheon at the Outing Club to hear Mrs. Frank Gordon and Mrs. Frank Nichols speak about the Mercy and St. Luke's Hospital Auxiliaries.

Volunteer work and the ethics involved were explained, and the speakers also traced the histories of their organizations. Mrs. Gordon is pub-

licity chairman for the Mercy Auxiliary, and Mrs. Nichols serves as president of the St. Luke's group.

Woodbury County

On Thursday morning, November 4, the officers of Sioux Med-Dames entertained the state officers of the Woman's Auxiliary to the Iowa Medical Society at a brunch at the Sioux City Country Club. Mrs. Howard Rudersdorf, the Sioux Med-Dames president, conducted a brief business meeting. The State Auxiliary officers who attended included Mrs. Henry Boe, of Sioux City, president; Mrs. R. E. Hines; Mrs. B. M. Merkel, of Des Moines; Mrs. M. E. Olson, of Minden; Mrs. S. M. Korson, of Independence; and Mrs. Hazel Lammey, of Des Moines, administrative secretary.

That evening the members of the Woodbury County Medical Society entertained their wives and the State Auxiliary Officers at their regular monthly dinner meeting at the Country Club. A panel discussion on "Religion and Medicine" (problems of life and the soul) was held. Those taking part in the discussion were: Dr. Carroll Brown, a Sioux City neurosurgeon; Rev. Russell Olson, pastor of Trinity Lutheran Church; Rabbi Albert Gordon, of Mount Sinai Temple; and Rev. Fr. Richard Zink, director of the Catholic Society for the Propagation of the Faith.

Worth County

The Worth County Medical Auxiliary met for a luncheon meeting at the Hotel Hanford Euchre and Cycle Club. The officers are Mrs. M. P. Allison, president, and Mrs. B. H. Osten, secretary-treasurer.

Mrs. Florynce Westly, of Manly, gave a report of the medical meeting she had attended in Des Moines, and had brought back with her the favors she had received at the dinners and banquets she attended. Everyone enjoyed seeing them.

Attending the luncheon were Mrs. Wm. McAllister and Mrs. S. S. Westly, of Manly; and Mrs. M. P. Allison, Mrs. B. H. Osten, Mrs. C. W. Bergen, and Mrs. R. Olson, all of Northwood.

If you move or have a change of address, please fill this out.

Send it to: Mrs. Hazel T. Lammey, 529-36th Street, Des Moines, Iowa 50312.

Mrs. .....
Last Name — Husband's First Name & Middle Initial

.....
Street Address

.....
City — County — State — Zip Code

A Health Career Day

The Woman's Auxiliary to the Polk County Medical Society held an area Health Careers Day for the Central Area on October 22, 1965, at the Veterans Administration Hospital in Des Moines. Approximately 70 students attended, representing seven schools in Polk County and also schools from the following towns: Blairsburg, Indianola, Fort Dodge, Kamrar, Osceola, Oskaloosa, and Williams. During the registration, a color movie of a surgical procedure was shown. The director of the VA Center, Mr. E. W. Christensen, welcomed the group, and Dr. Henry Decker, chief of staff, then spoke to the students. Mr. Clarke Bennet, chief of personnel, talked on job opportunities in the VA. Refreshments were served, and then a brief résumé was given by representatives of each service in the Hospital. Volunteers who work regularly at the Hospital served as hostesses during the lunch. At that time, the president of each Health Careers Club gave a brief report on the activities of her organization. Following lunch, there were conducted tours of the various departments throughout the Hospital. Before departing, the guests were served cokes.

Mrs. Ralph Hines, first vice-president of the Woman's Auxiliary to the Iowa Medical Society, represented that organization for this meeting, and Mrs. Charlotte From, president of the Polk County Auxiliary, and Mrs. Robert Reed, co-chairman of the Health Careers Committee, represented the Polk County Auxiliary, assisted by Mrs. Victor Parson and Mrs. Walter Modaff.

The program was very well received by the students, and they were impressed by the wide range of occupations available in medicine and its allied services. Some of the occupations discussed included the following: nursing, dentistry, dietetics, chaplaincy, medicine, medical illustration, pharmacy, surgery, laboratory, psychology, social work, radiology, volunteer services, and occupational, recreational and corrective therapies.

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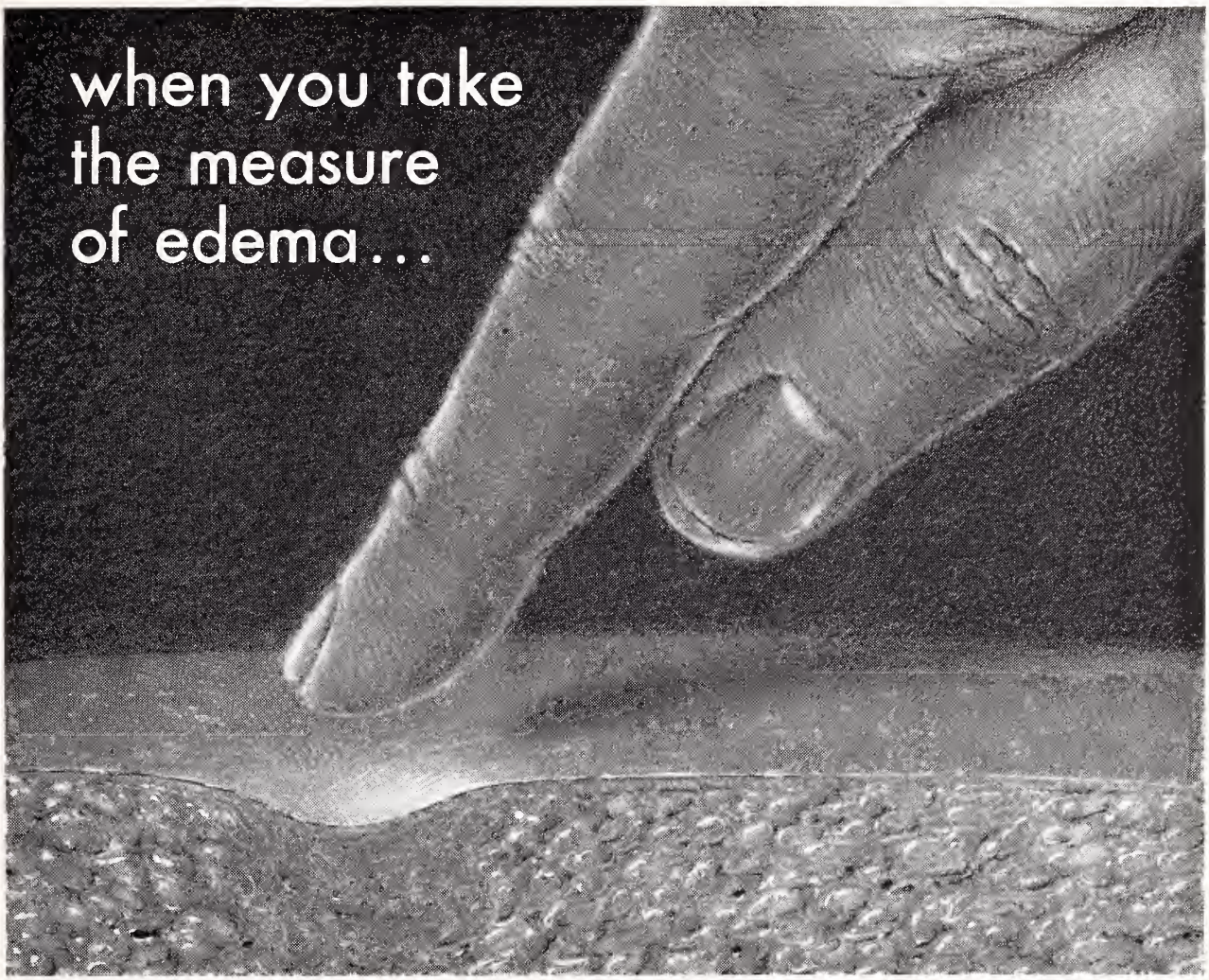

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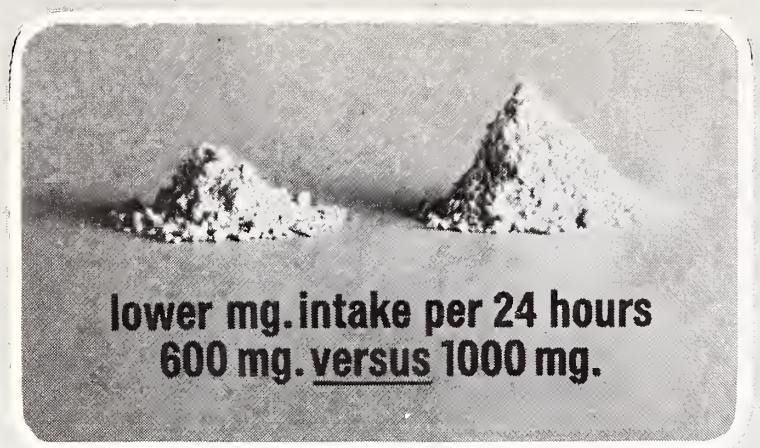

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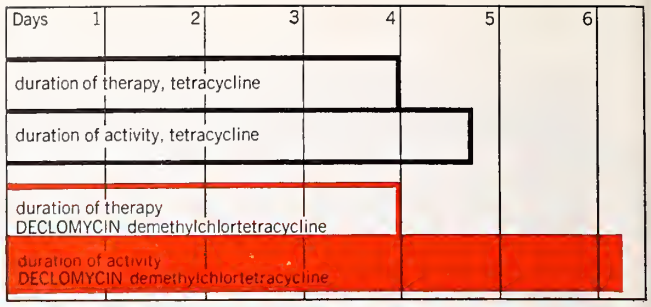

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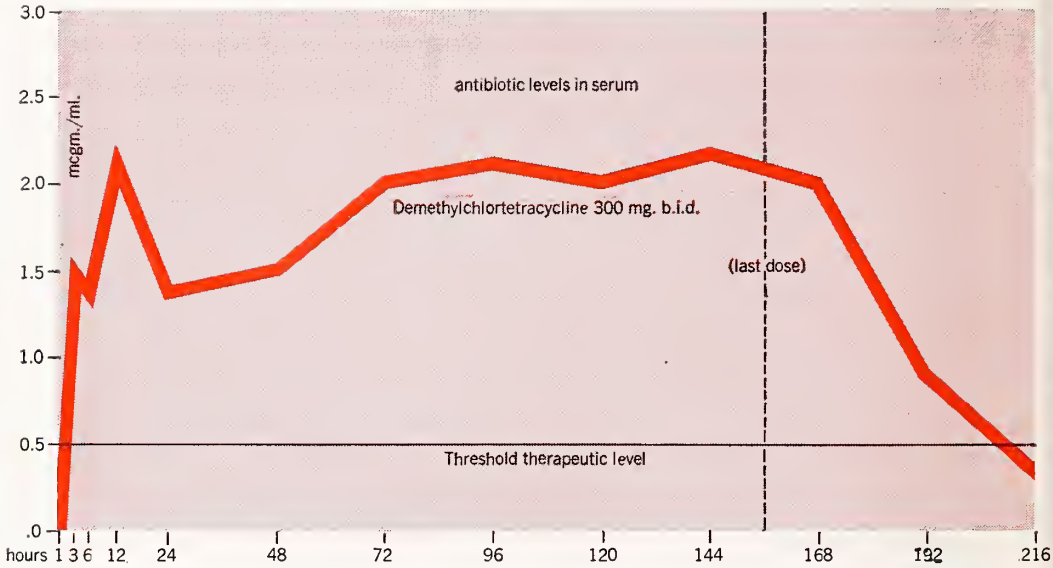
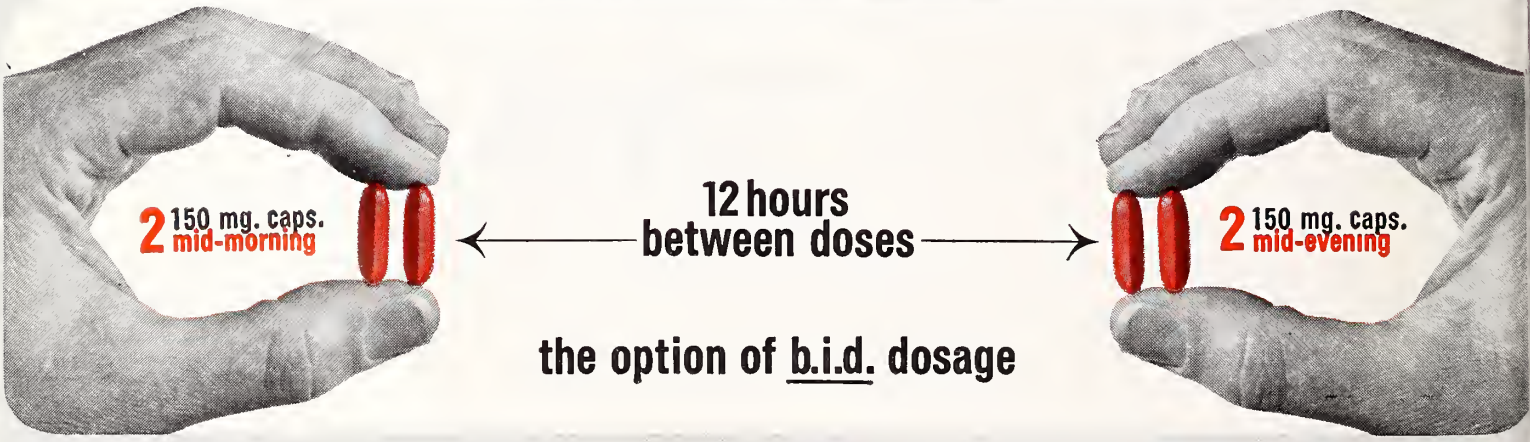


From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962



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Personals

At Los Angeles during October, **Dr. W. O. Purdy,** medical director of Equitable Life Insurancy Company of Iowa, Des Moines, was elected vice-president of the Association of Life Insurance Medical Directors of America.

At the annual meeting of the Radiological Society of North America, held in Chicago November 29 to December 3, **Dr. H. F. W. Pribram** discussed "The Radiology of Extra-Axial Masses and Their Differential Diagnosis," and **Drs. Harry W. Fischer** and **Steven H. Cornell** presented a paper on "The Toxicity of the Sodium and Methylglucamide Salts of Diatrizoate, Iothalamate and Metrizoate." All three are on the faculty of the Department of Radiology at the U. of I. College of Medicine.

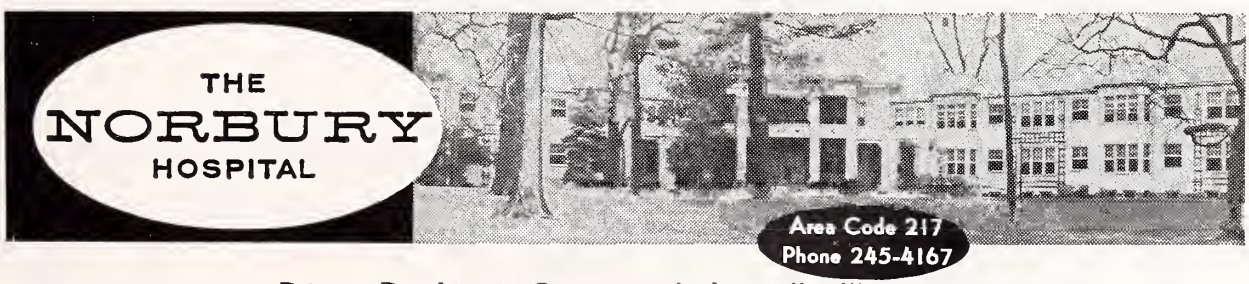
At the AMA's Seventh National Conference on the Medical Aspects of Sports, in Philadelphia on Sunday, November 28, **Dr. William D. Paul,** professor of physical medicine and team physician at the University of Iowa, was chairman of a session on "Readiness for Sports Participation."

Dr. Dale Harding spoke on the physical and emotional problems of elderly people at the fourth and last of a series of meetings sponsored by the Commission on Christian Social Concerns, in Eagle Grove on Sunday, November 21.

Addressing a Nursing Institute on Prenatal and Perinatal Care, at Iowa City in mid-November, **Dr. Robert M. Kretzschmar,** an associate professor of obstetrics and gynecology at the U. of I., said that although the death rate from cancer of the cervix has been cut in half during the past 20 years, it could be almost eliminated if all women would undergo a Pap test yearly. "Nationally," he said, "only 15 per cent of women took a Pap test last year, and only 12 per cent of Iowa women did so. The percentages ranged from a low 6 per cent for women in Alaska to a high of more than 30 per cent in the District of Columbia."

Dr. Kretzschmar is chairman of the 1966 State Crusade Committee of the American Cancer Society, Iowa Division, Inc. which will make the organization's annual fund solicitation in April. The other physicians on that Committee are **Dr. Charles Birdsall,** an Ames gynecologist, and **Dr. Don E. Woodard,** who practices that same specialty in Waterloo. **Dr. Richard A. Hastings,** an Ottumwa radiologist, is president of the Iowa Division.

The Des Moines School Board has appointed **Dr. E. Parish Lovejoy,** an anesthesiologist, as di-



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rector of its school health services. Previously, Dr. Lovejoy was employed part-time as acting health director and examining physician for the Des Moines Public Schools.

Dr. Edward E. Mason, a professor of surgery, and **Dr. Richard E. Peterson,** an associate professor of nuclear medicine, had parts in the program of a conference on diet therapy held at the University of Iowa on November 18.

Dr. Forest H. Coulson discussed diabetes at a meeting of the Burlington Rotary Club in mid-November. He practices internal medicine in Burlington.

Dr. George R. Gundrum, whose move from Nauvoo, Illinois, to Burlington was announced briefly in last month's JOURNAL, is a native of Austria and a 1954 graduate of the medical school at Innsbruck. He did postgraduate work in a hospital in Linz, Austria, from June, 1954, until September, 1956, and interned at Norton Memorial Infirmary, Louisville, Kentucky, for about a year thereafter. From October, 1957, to May, 1959, he was a staff member at the State School in Dixon, Illinois. He and Mrs. Gundrum have four children.

Construction contracts totaling $639,798 were let on October 19 for an addition to the Crawford County Hospital, in Denison. Among other improvements, the project includes an expansion of the x-ray department, an enlargement of the records library, a new lobby, a new maternity department, and air conditioning of all rooms. Work was to start immediately.

Walter R. Ingram, Ph.D., head of the Department of Anatomy at the U. of I. College of Medicine, has told a reporter for the IOWA CITY PRESS CITIZEN that Jessica Milford's book THE AMERICAN WAY OF DEATH, among other things, has aided his Department in getting enough bodies for students to dissect. In an interview published in the issue for November 15, he is quoted as saying that when he came to Iowa City there was one body for every two students. Now, usually, there is one for every four, but the situation is improving. The school gets about 50 bodies per year, a number which he considers "adequate."

He said that between 300 and 400 people have willed their bodies to the U. of I., and that the

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Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug. Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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University has a clause which can be used for that purpose. A major difficulty is that many wills are not read until burial has taken place. Thus it is wise for testators to deed their bodies to the College of Medicine by means of a separate legal instrument.

When the new basic sciences building has been completed, admissions to the U. of I. College of Medicine will be increased from 120 to 160 per year. At that time, the shortage of cadavers may once more become acute.

Dr. M. T. Jenkins, a professor of anesthesia at the University of Texas Southwest Branch, served as a visiting professor at the U. of I. College of Medicine, November 17-20, under the sponsorship of the Iowa Society of Anesthesiologists.

Dr. Janis Straumanis discussed "Poisoning and Safety Hazards Around the Home" at a meeting of the Solon Women's Club on November 18.

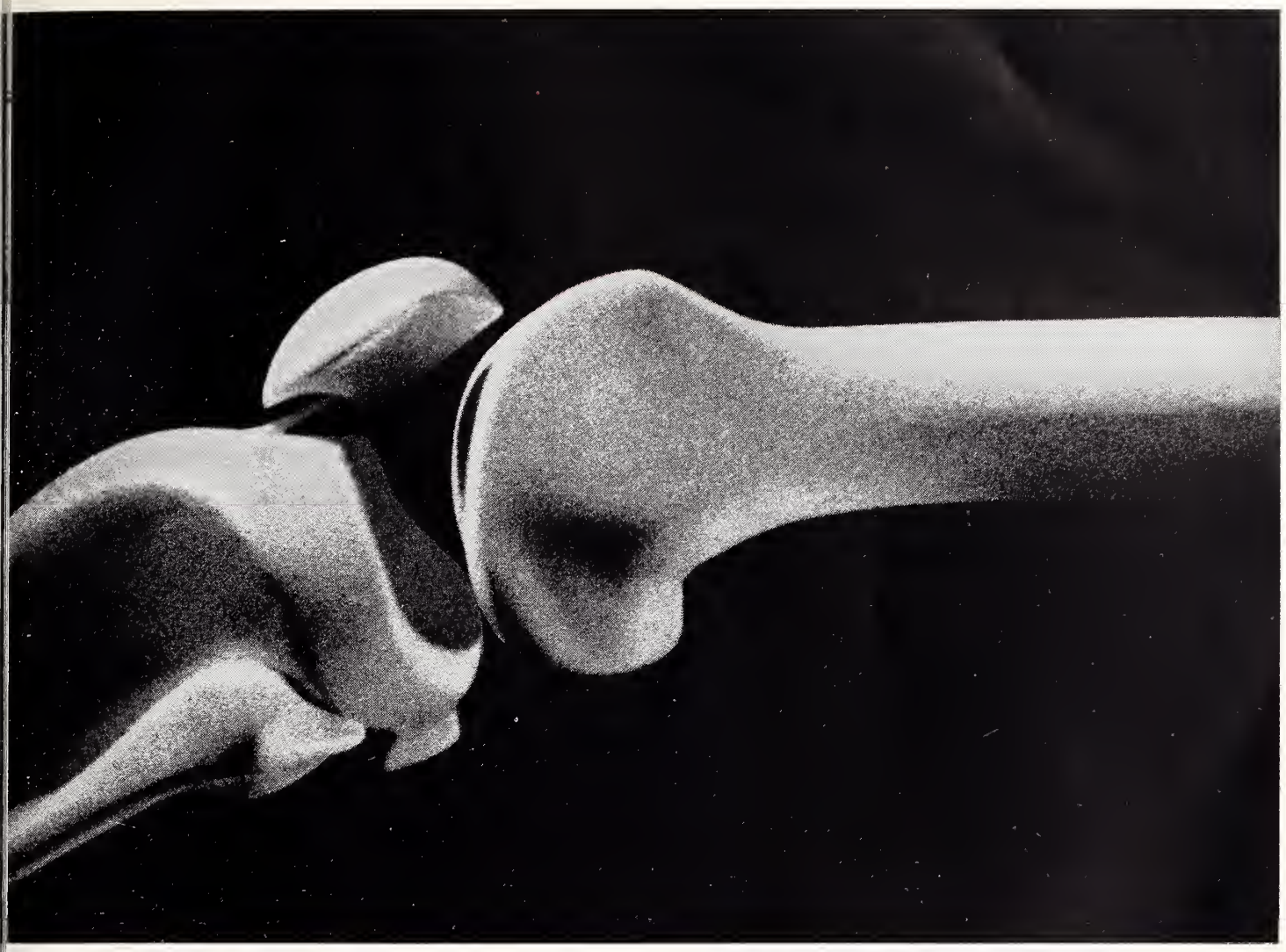
Dr. and Mrs. John O. Eiel, of Osage, attended the 59th annual meeting of the Southern Medical Association, in Houston early in November.

Dr. A. E. Mayner, who began practice in Winthrop last July, has joined **Dr. P. J. Leehey**, of Independence, and plans to divide his time between those two communities.

At Morning Sun, early in November, **Dr. Dale Weber**, of Clinton, gave an illustrated talk to the Louisa County Teachers Association on his experiences at Dr. Albert Schweitzer's clinic in equatorial Africa.

The eleven members of the Johnson County Board of Health appointed by the Board of Supervisors on November 16 include five doctors of medicine: **Dr. Richard Eckhardt**, Iowa City, chairman; **Dr. Philip A. McLaughlin**, Coralville; **Dr. Andrew C. Garvy**, Iowa City; **Dr. G. J. Zibilich**, Lone Tree; and **Dr. R. J. Hennes**, Oxford.

Dr. Herbert Neff, of Guthrie Center, realized one of his dreams when New Homestead, a residence for retired persons, was dedicated on November 14. He began seeking support for his idea as long ago as 1959, and a non-profit corporation subsequently was formed and raised $50,000 for the project.



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ntraindications
dema, danger of cardiac decompensation; story or symptoms of peptic ulcer; renal, patic or cardiac damage; history of drug lergy; history of blood dyscrasia. The drug ould not be given when the patient is senile, or when other potent drugs are given ncurrently. Large doses are contraindicated in patients with glaucoma.

ecautions
btain a detailed history and a complete ysical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

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10,384	1964	88.5%

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2,492	1964	96.7%

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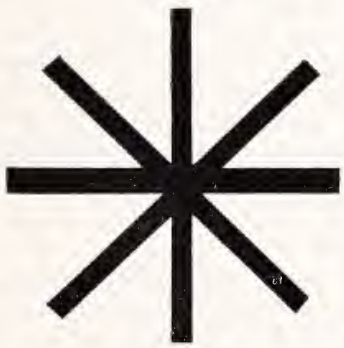
Dr. John DeGroote, of Lake City, reported on "New Concepts in the Diagnosis and Treatment of Acute and Chronic Urinary-Tract Infection" at the October 27 meeting of the Calhoun County Medical Society.

In a column titled "Around the Rotunda" supplied to newspapers in the state by **Mr. Harrison Weber, Dr. James O. Cromwell,** the director of state mental institutions for the Board of Control, has been quoted as saying that the patient/employee ratio at the hospitals under his supervision is now 1:1, the minimum that is acceptable to the American Psychiatric Association. Dr. Cromwell hastened to make clear that roughly one-third of the employees are maintenance and administrative personnel, and that another third are nurses and other attendants, leaving no more than a third for those providing therapy. And also, he pointed out, only about a third of the employees are providing service at any one time, and the ratios of employees to patients are higher at the mental health institutes than they are at the institutions for the mentally retarded.

In the same column, **Dr. Selig M. Korson,** superintendent of the Independence Mental Health Institute, was quoted as saying that the patient load at his hospital has been reduced from 1,200 to 500 in the past eight years, despite the fact that more and more patients have been admitted each year. "This has not been accomplished by discharging an excessive number of patients to the county homes," he declared. "As a matter of fact, only 15 to 18 per cent of our patients have been discharged to county and nursing homes." Since 1950 the population in all four mental health institutes has decreased 65 per cent, and the county-home mentally ill population has increased just 15 per cent in the same 15-year period.

Dr. Frank N. Metzner, who has been the full-time industrial physician for the Dubuque Packing Company and, since June 15, health officer of Dubuque County, moved to Harrisburg, Pennsylvania, last month, to take a position with the Bethlehem Steel Corporation. Before coming to Dubuque, he had been on the staff of the Pennsylvania State Department of Health, in Harrisburg.

Dr. Carl J. Lohmann, of Burlington, is now medi-



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cal director of the Iowa Army Ammunition Plant there. He was acting medical director of that installation during the disability of the late **Dr. Milton J. Latimer,** and until recently he was in partnership with **Drs. Jesse L. Saar** and **Theodore T. Mazur.**

The community of Linn Grove honored **Dr. A. B. Carstensen** at an open house on Sunday, October 31, for his 40 years of service. He does not propose to retire.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, spoke on "The Role of Physical Diagnosis in Modern Medical Science" at the fifth annual Milwaukee Medical Conference, November 11-13.

In an election held November 8, **Dr. J. A. McFarlane** was chosen to succeed **Dr. D. B. Blume** as president of the staff at Lutheran Hospital, Sioux City. **Dr. L. J. Dimsdale** was named vice-president; **Dr. Havner H. Parish, Jr.,** secretary-treasurer; and **Drs. H. I. Down, A. W. Horst** and **A. W. Horsley** were elected members of the executive committee.

The 16-bed tuberculosis ward at Broadlawns-Polk County Hospital, in Des Moines, has been closed. The administrator, **Mr. Charles Ingersoll,** said the 12 staff members will be transferred to other sections of the Hospital. Five patients were moved into medical wards, and the one person with active tuberculosis was moved into an isolation area. He said that those six constituted about an average number for the TB service in recent months, though at one time there had been as many as 55. The Hospital will continue to treat TB on both an inpatient and an outpatient basis.

Drs. Roger A. Ott, Donald J. McFarlane, John S. Chapman, F. Benjamin Merritt and **James P. Schmitz,** of Dubuque, attended a meeting with representative citizens of Dyersville, early in November, to exchange ideas regarding the proposed hospital at Dyersville and to assure cooperation between the two communities regarding it. The idea of making the Dyersville institution a satellite of Xavier Hospital, Dubuque, was raised, and it was decided that it should be explored at a meeting with the Areawide Health Facilities Planning Committee.

During the week of November 15-19, WOI-TV, Ames, presented programs on advances in medicine in conjunction with the Iowa Medical Society. **Dr. L. J. O'Brien,** a Fort Dodge surgeon, was interviewed on the first day, **Dr. James F. Speers,** Des Moines, director of regional and community services in the State Department of Health, on the second, **Dr. Charlotte Fisk,** a Des Moines pediatrician, on the third, and **Dr. William Baird,** an Ames orthopedic surgeon, on the fourth. All four physicians participated in a panel discussion on the final day's program.

Dr. Lloyd J. Filer, a professor of pediatrics at the U. of I., has been made a consultant to the Committee on Nutrition of the American Pediatrics Association.

Dr. and Mrs. Benjamin F. Kilgore, of Des Moines, returned in mid-November from a three-week trip to Lebanon, Jordan, Israel and Egypt.

A documentary moving picture is being made of the histoplasmosis epidemic that occurred at Mason City and the measures used in preventing a recurrence. It will be used to instruct public health personnel across the country. It is to recount the two outbreaks, the second of which followed removal of the last of the felled trees from a bird-roost area along Willow Creek. Finally and most importantly, the film will show the method developed in Mason City to decontaminate the soil by means of a formaldehyde solution. "Everything is fine so far," **Dr. Fred Tosh,** of the USPHS Kansas City office, declared when he revisited Mason City early in November. "Tests up to now have only shown light traces of fungus surviving underground, and none have lived on the surface. Right now there seems to be no chance for new infection from the site." The technic developed in Mason City may be employed in Mexico, Missouri, where an outbreak from a nearly identical cause occurred several years ago, and in Baltimore and elsewhere.

Dr. Wendell L. Downing, of LeMars, is recuperating at home from major surgery performed in Rochester, Minnesota, during November.

Dr. William H. Sigalove became the full-time director of medical education at Broadlawns-Polk County Hospital, Des Moines, on December 1, succeeding **Dr. J. F. Lawlor.** Dr. Sigalove had been in the private practice of internal medicine (hematology) at Fond du Lac, Wisconsin, and earlier had served his internship and residency at Cook County Hospital, Chicago.

Dr. Hans Zellweger, a professor of pediatrics at the U. of I. College of Medicine, has been named to the medical advisory board of the National Foundation for Neuromuscular Diseases, and also to the medical advisory committee of the Foundation's new Genetic Alert Program. The latter is a screening project designed to find infants and young children with latent forms of any of four hereditary neuromuscular diseases.

Dr. F. H. Aid, of Burlington, underwent cardiovascular surgery in Houston, late in November.

At the December 1 meeting of the Johnson County Medical Society, **Dr. Robert C. Hardin,** dean of the U. of I. College of Medicine, spoke on "Projections on Health Center Growth." Though the physical plant of the College of Medicine must be enlarged to accommodate additional medical students, Dr. Hardin said that most of the construction will be necessitated by the growth of the University as a whole. The College of Medicine provides instruction for many non-medical students and health services for all of them. Total enrollment at the U. of I. is expected to grow from the present 16,000 to about 25,000 within the next few years.

Dr. Rudolf Selo, a Council Bluffs anesthesiologist, was appointed medical examiner for Pottawattamie County on December 1. He succeeds **Dr. Arthur L. Sciortino,** who did not seek reappointment after serving five years.

Dr. Gary P. Hayes, who recently began general practice in Eldora, married **Miss Diane B. Cornish** on November 27, at the Westminster Presbyterian Church, in Cedar Rapids. Mrs. Hayes is a nurse.

Dr. James Gault, of Creston, and **Dr. William H. Harper, Jr.,** of Keokuk, have been elected to active membership in the American Academy of General Practice.

A series of televised discussions presented recently by the Linn County Medical Society over station KCRG, Cedar Rapids, had the general title "Profiles of Medicine," and concerned various aspects of the physician's relationship with his community. They were broadcast from 10:15 to 10:45 on four successive Monday nights, November 29 and December 6, 13 and 20. The first program dealt with medicine and religion, and the participants were **Dr. Richard Sedlacek,** moderator, and **Dr. Carlton B. Lake, Rabbi Isaac Neuman, Rev. Irwin Matt** and **Rev. Donald Jafvert,** panelists.

The second program dealt with the question, "Does the Doctor Pay His Civic Rent?" **Dr. Sylvan M. Lehr** was the moderator, and the panelists included **Mr. Robert H. Caldwell,** executive vice-president of the Cedar Rapids Chamber of Commerce; **Rev. J. Richard Wagner; Mr. John J. Locher, Jr.,** an attorney and hospital trustee; **Mr. Robert E. Yaw,** a hospital trustee; and **Dr. Frank R. Peterson.**

Dr. L. H. Prewitt, of Ottumwa, gave two hours of instruction on allergic manifestations of the eye at a national meeting of ophthalmologists and otolaryngologists in Chicago during November. At that time, he was elected president of the Hansel Foundation for Allergy, a volunteer research group.

Dr. James R. Bell foiled an attempt by three men, at 7:15 p.m. on November 26, to break into the building that he and **Dr. Paul Holzworth** occupy at 4950 Franklin Avenue, Des Moines. The physicians heard a loud pounding, and when Dr. Bell went to the rear door and opened it, a man who had broken the latch on the screen-storm door swung at him with his fist, but missed. Dr. Bell then shut the inner door, and his assailant's second blow struck wood. He said he saw two other men sitting in a parked car behind the building.

On November 18, **Dr. H. A. Tolliver,** of Charles City, addressed the Floyd County Nurses Association on "The Patient With Myocardial Infarction."

Addressing the Iowa-Illinois Central District Medical Association, at Marando's, in Milan, Illinois, November 17, **Dr. Donovan F. Ward,** of Dubuque, immediate past-president of the AMA, cited a bulletin of Americans for Democratic Action which said that the ADA may include a government-supported federal health plan in its 1966 legislative program. He declared that the AMA has appointed committees to counsel with the HEW Secretary so as to preserve and strengthen, to the fullest degree, the freedoms of physicians.

Dr. Walter R. Hathaway, who came to Council Bluffs to head the pathology department at Jennie Edmundson Hospital in May, 1963, has been elected to a four-year term on the Council Bluffs City Council, which is to start on January 1.

On Sunday, November 14, the town of Buffalo

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Center gave a plaque to **Dr. Robert C. Hardin,** dean of U. of I. College of Medicine. A 1930 graduate of the school there, he is one of the community's favorite sons, and he had returned to help dedicate an addition to the school building. **Dr. Harley Feldick** made the presentation.

Dr. Jeanne M. Smith, an assistant professor of internal medicine at the U. of I., believes she has evidence that hay fever and asthma may be infectious diseases. With the help of **Dr. Lloyd A. Knowler,** of the Mathematics Department, she compiled detailed records on 1,760 rural and 1,440 urban families in Johnson County, and found that children were nearly 20 times more likely to have hay fever or asthma if someone else in the family was allergic, and that children with two allergic parents were twice as likely to have one of those allergies as were those with just one allergic parent each. Among adults who exhibited allergies only after reaching adulthood, an overwhelming proportion did so after marrying individuals with allergies. Dr. Smith found no indication that allergies are transmitted from one family to another because children from two households are playmates.

The Child Guidance Center in Des Moines currently has two psychologist internes and three internes in psychiatric social work. The former are Ph.D. candidates at Columbia University and the University of Oregon, respectively. The social work students are from the University of Iowa. Early this past year, **Dr. Paul Temple** began a two-year residency in child psychiatry there, after completing a residency at the State Mental Health Institute in Independence.

Members of the Polk County Medical Society were guests of the Northwestern Bell Telephone Company, at a dinner meeting held in its building at Des Moines on December 15. The speaker, **Cecil H. Coker, Ph.D.,** of the Bell Telephone Laboratories, Murray Hill, New Jersey, demonstrated synthetic speech produced by a digital computer.

Television station WHO, Des Moines, invited the Polk County Medical Society to plan and present programs regularly, from 3:00 to 4:00 p.m. each Monday, after physician participants had performed very satisfactorily on another series entitled "Ask the Experts." In the new series, **Dr. Wallace Rindskopf** has discussed pathology and blood banks; **Dr. Albert Mintzer,** obstetrics and gynecology; **Dr. Lawrence O. Ely,** surgery; **Dr. Floyd Burgeson,** general practice and the family physician; **Dr. Lawrence Staples,** heart disease and high blood pressure. On December 13, **Dr. Edward Hertko** talked on diabetes; on December 20, **Dr. Thomas Ghrist** discussed diseases of the blood; on December 27 **Dr. George Caudill** spoke on allergies, particularly in children; and on January 3 **Dr. Alexander Matthews** will speak on diseases of the lungs.

Dr. Marion E. Alberts has become the chief of staff at Mercy Hospital, Des Moines, and **Dr. Marvin H. Dubansky** has been chosen chief-elect. **Dr. Charles O. Johnson** is the new secretary-treasurer.

During the first half of November, the Des Moines Home Care-Homemaker Service provided the services of 32 homemakers for a total of 1,333 hours to 43 patients. The patients had the following conditions: 2—twins; 6—CVA; 3—emotional problems; 2—senility; 1—brain surgery; 8—fractures; 3—cancer; 1—neurologic problem; 2—multiple sclerosis; 2—diabetes; 3—vision deficiencies; 1—ulcer; 1—emphysema; 1—Parkinson's disease; 3—arthritis; 2—heart disease; 1—burns; and 1—mental retardation. Twelve patients paid the full fee of $2 per hour; 13 of them paid $1.25 per hour or more; and eight paid less than that amount. Ten patients paid no fees. In many instances the services of public health nurses were utilized, in addition to those of the homemakers.

The IOWA CITY PRESS CITIZEN for December 3 contained the report of an interview with **Dr. Harry R. Jenkinson,** who has been in private practice there since 1922. Dr. Jenkinson told the reporter that he won't celebrate the fiftieth anniversary of his entry into medical practice until next June, but that the AMA has "jumped the gun" by awarding him a "50 Years in American Medicine" citation. He graduated from the U. of I. College of Medicine in 1916 and was the first resident in internal medicine there.

Dr. William Harper, who has been treating some of the victims of the armory explosion at Keokuk, called upon the medical staff of Cook County Hospital, Chicago, for some of the newly developed "burn butter" sulfamylon, which had been described in the November 19 issue of MEDICAL WORLD NEWS. **Dr. John Bostwick,** who developed the ointment, and his associate **Dr. E. J. Carey** flew to Keokuk with some of the material. Dr. Harper is said to be well pleased with his patients' response to it thus far.

Dr. Roger C. Floren has joined the staff of the VA Hospital at Knoxville. He received his M.D. from Loma Linda Medical School in 1939, interned at St. Mary's Hospital, Saginaw, Michigan, served as a medical missionary in Bolivia, was house physician at the Florida Sanatorium and Hospital in Orlando for three years, and since 1945 has been in general practice in Orlando.

The Woodbury County Medical Society held a Christmas party and an election of officers at the Sioux City Country Club on December 16.

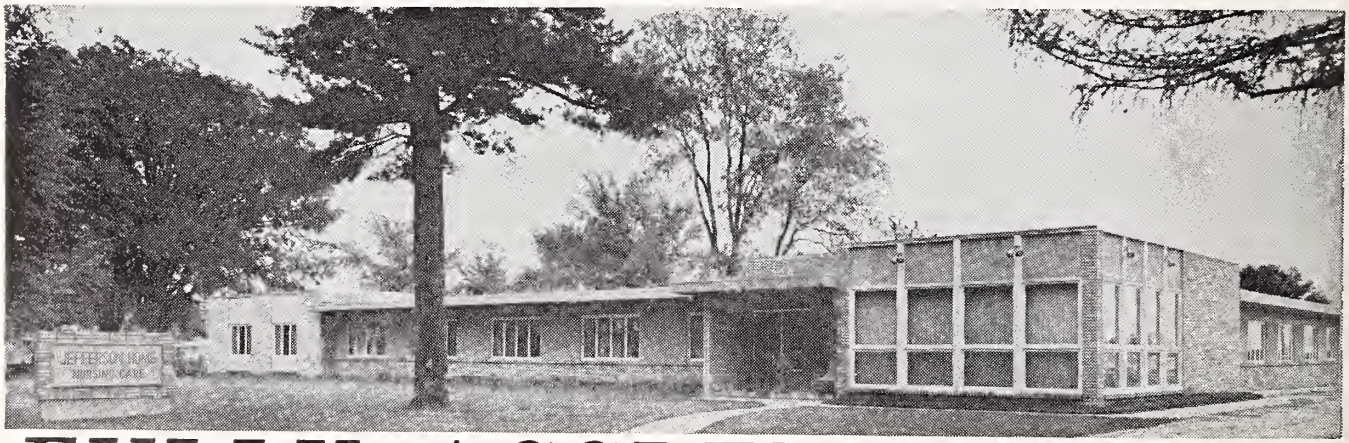
Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 529-36th Street, Des Moines, Iowa 50312.

Deaths

Dr. James R. Thompson, 82, who practiced medicine and surgery in Waterloo for more than 50 years, died at Schoitz Memorial Hospital there, on November 10, of complications following a fall. He was a 1905 graduate of the U. of I. College of Medicine, and a Life Member of the Iowa Medical Society.

Dr. Evelyn H. Dulin, 61, of Iowa City, died at Mercy Hospital there, on October 31. She had been in the hospital for three months.

Dr. Joe M. Standefer, 57, died of coronary thrombosis on November 16, at his home in Littlefield, Texas. A 1932 graduate of the University of Texas Medical School, he engaged in general practice in Tama, Iowa, from 1933 to 1942, took a pediatric residency at Raymond Blank Memorial Hospital, Des Moines, and practiced pediatrics in Des Moines from 1948 to 1959.



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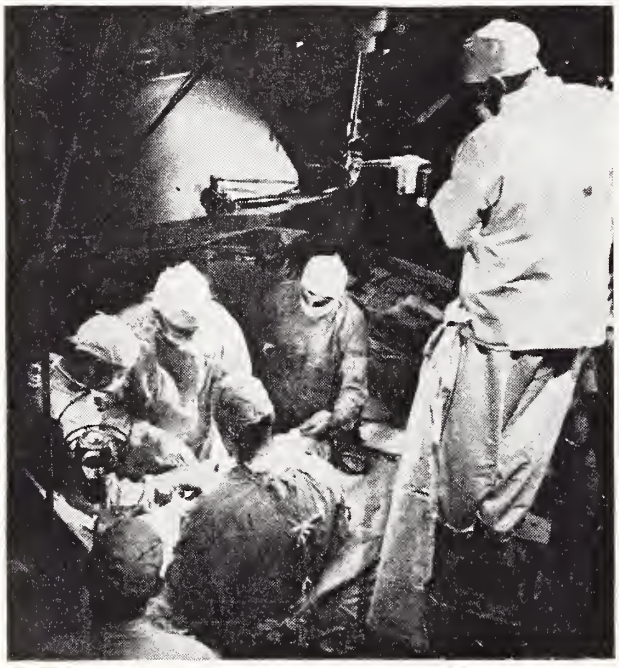

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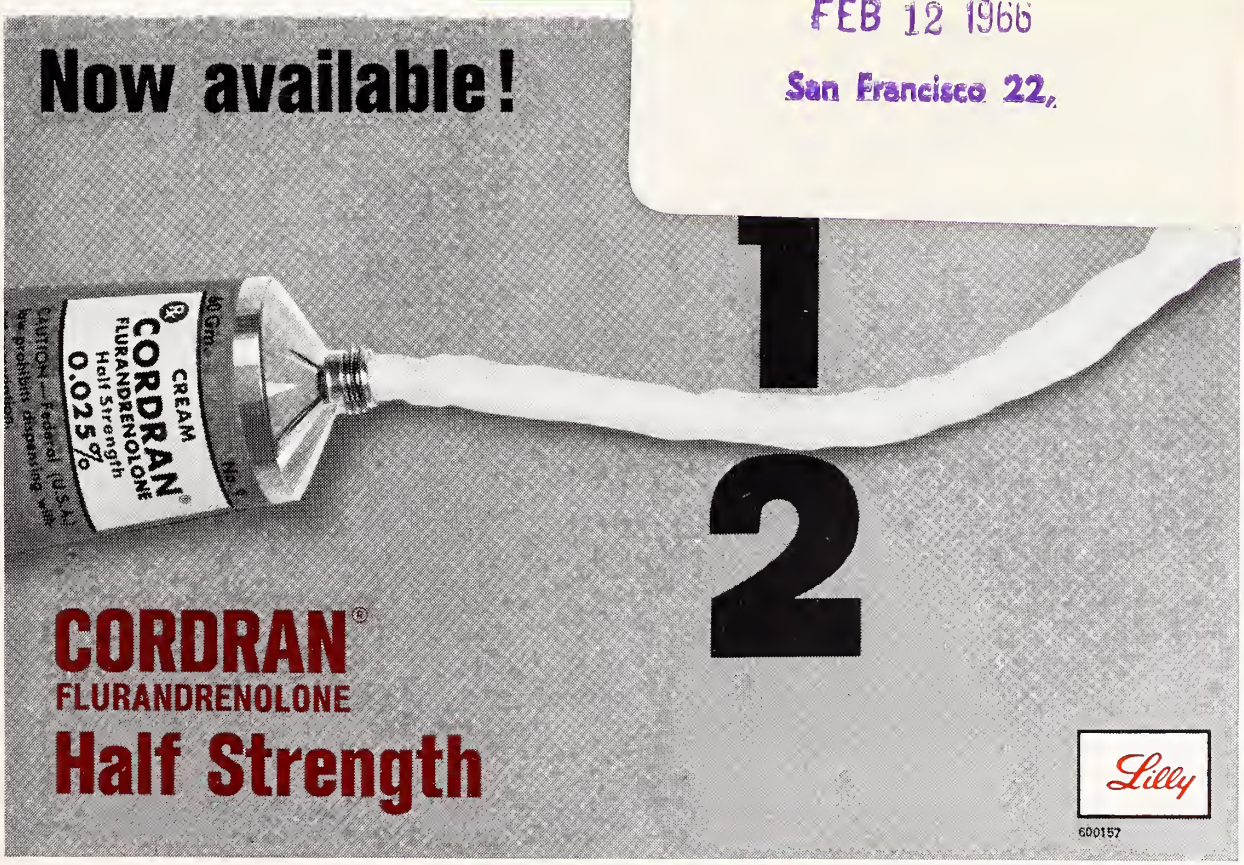

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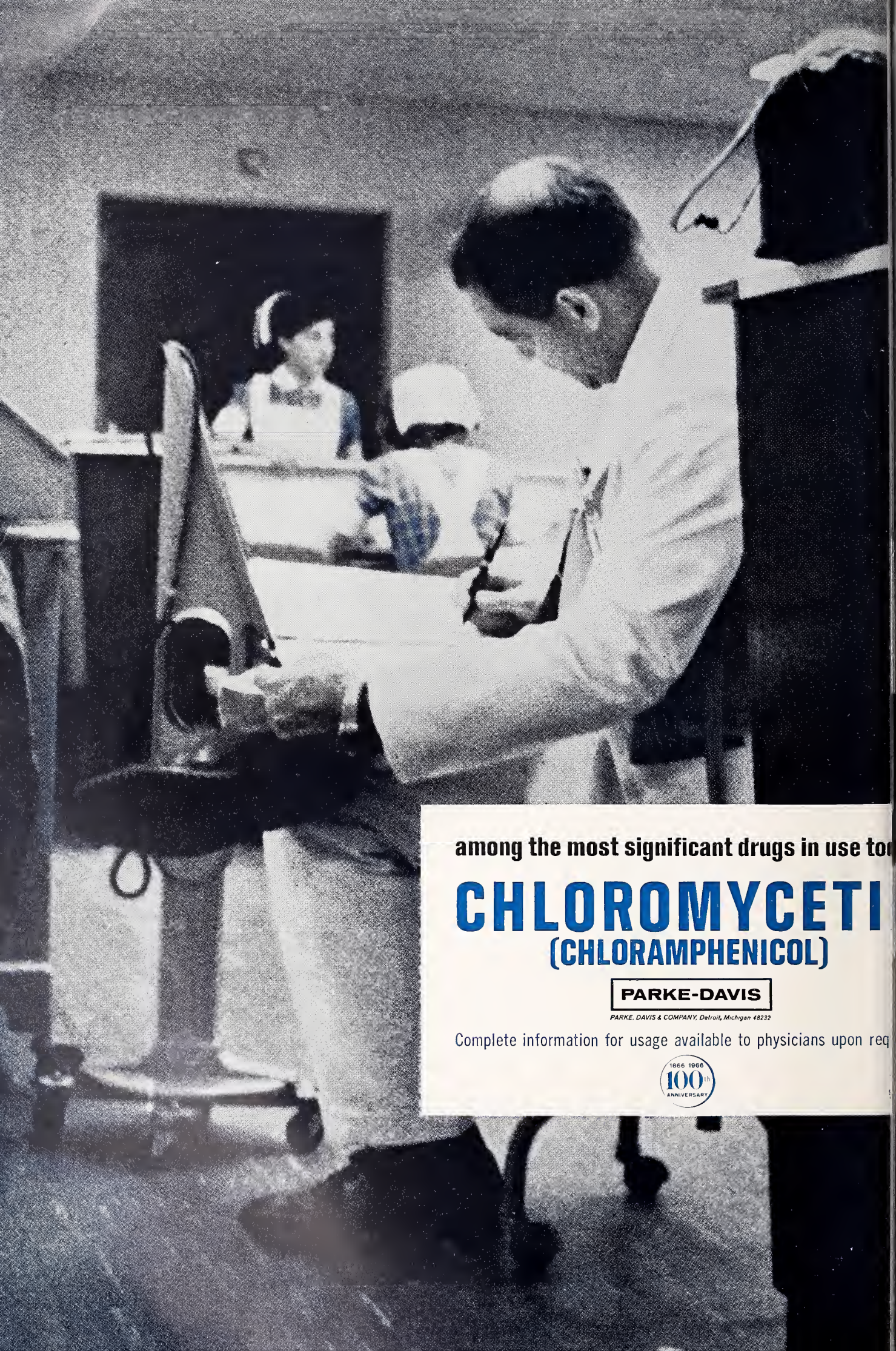
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The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVI FEBRUARY, 1966 No. 2

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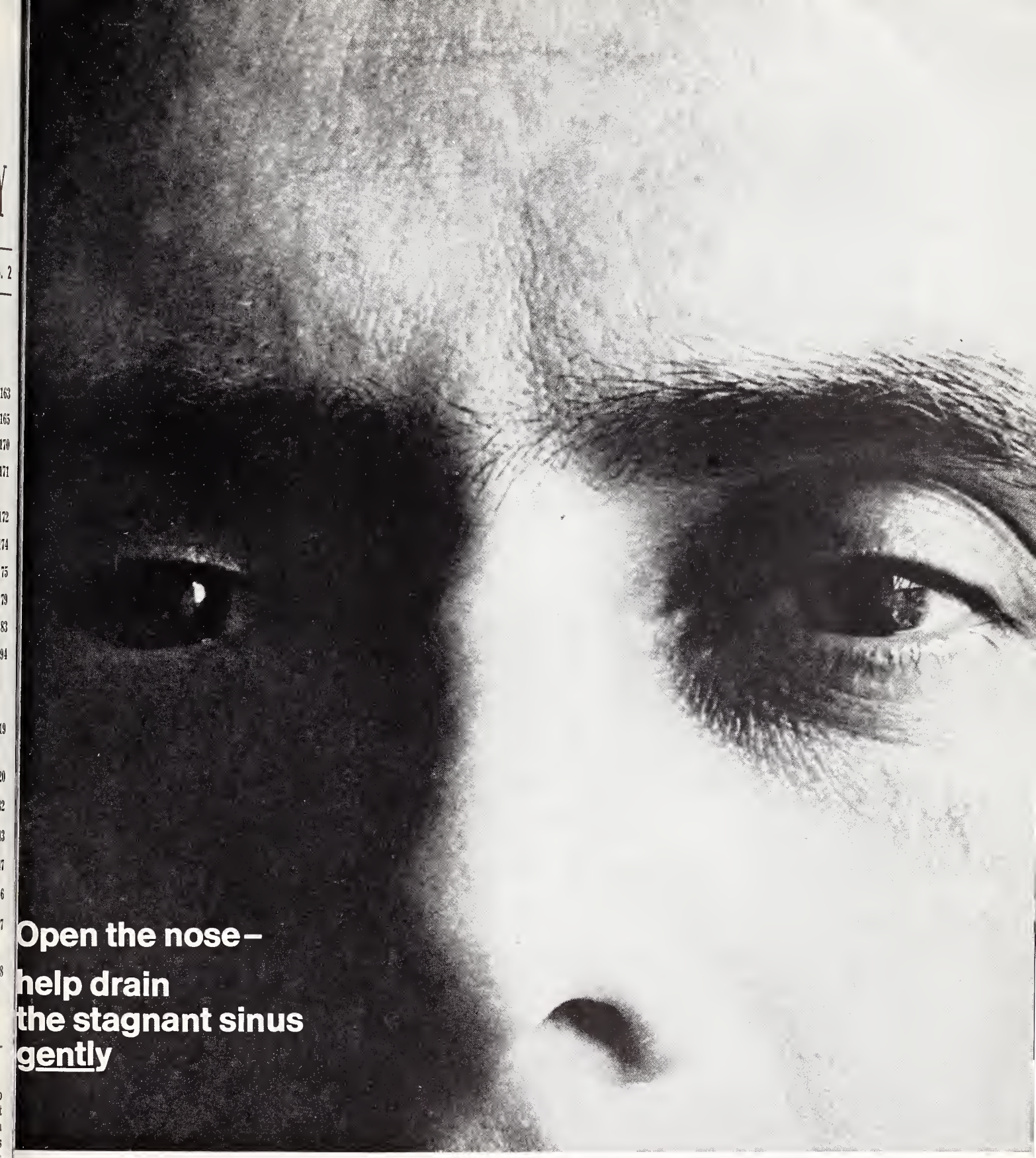

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Neo-Synephrine stops the boggy feeling of colds at once—works against factors that induce sinusitis. With Neo-Synephrine nose drops, spray or jelly, turbinates shrink on contact, obstructed ostia open and drainage is re-established.

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*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

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In colds and sinusitis

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solutions/sprays/jelly

Washington, D. C.—The staff of the Senate antitrust subcommittee has been investigating the rise in quinine prices. The investigation resulted from receipt by members of Congress of complaints from constituents. Many of the complaints reported a sharp rise in the price of quinidine, a quinine derivative prescribed for irregular heart beats.

The Pharmaceutical Manufacturers Association attributed the price rise to a combination of decreased supplies and rising demands. A spokesman for the Association said that it had become increasingly difficult to obtain the raw material, the bark of the cinchona tree. He said that Indonesia, once the principal supplier, had virtually cut off its exports of cinchona bark to the Western World. Other suppliers, he said, include the Congo and some South American countries. He said these sources were seriously limited, but that the shortage is not expected to reach critical proportions.

The PMA spokesman attributed the rising demand to the appearance of new strains of malaria that are resistant to synthetic drugs developed as quinine substitutes during World War II. This has caused demands for natural quinine to rise sharply in such malaria-infested areas as Viet Nam.

* * *

The Food and Drug Administration has taken the first steps in implementing the new law designed to halt illegal traffic in depressant and stimulant drugs.

Acting FDA Commissioner Wilton B. Rankin announced proposed regulations and appointed an advisory committee of experts as authorized by the Drug Abuse Control Amendments law enacted last year. The Advisory Committee on Abuse of Depressant and Stimulant Drugs, which held its first meeting in late December, assisted the FDA in determining the drugs covered under the new, tighter controls effective February 1, 1966. The new law specified amphetamines and barbiturates, but also authorized the HEW Secretary to designate other depressant and stimulant drugs. At its first meeting, the advisory committee considered several classes of such drugs, including certain tranquilizers, LSD-25 and other hallucinogenic agents.

The FDA regulations listed details of the records which the new law requires to be kept by every person manufacturing, compounding, processing, selling or otherwise distributing the designated drugs. The first required record is an inventory of stocks on hand of such drugs as of Feb. 1. This initial inventory must contain the identity and quantity of all the specified drugs in finished form under the control of the registrant. Records thereafter must accurately list further manufacture, receipt and disposition of the drugs.

The record-keeping requirements were designed to permit government agents to follow the movement of the medications—all of which are prescription drugs—from producer to consumer.

The FDA commissioner is authorized to determine that a stimulant or depressant drug has a potential for abuse, and therefore should be covered under the law, if there is evidence of:

—Individuals taking the drug in amounts sufficient to create a hazard to their health or to the safety of other individuals or the community.

—Significant diversion of the drug from legitimate drug channels.

—Individuals taking the drug on their own initiative, rather than on advice of a physician or osteopath licensed by law to administer such drugs.

Most physicians won't be affected directly by the new arrangement, since the regulations state: "The maintaining of small supplies of these drugs for dispensing or administering in the course of professional practice in emergency or special situations will not be considered as regularly engaged in dispensing for a fee."

* * *

A panel of leading businessmen has warned of the dangers of relying too heavily on government for administration of health and retirement plans. Such government programs should be used to help the sick, disabled and aged, the panel said, "Only if voluntary and private means—truly tested—cannot adequately meet society's needs. . . . Heavy reliance on government can discourage the experimentation and innovation needed to solve our health and retirement problems. Such reliance also can narrow the freedom of choice of people who prefer to meet their needs in their own ways."

This statement was a highlight of a 263-page report entitled "Poverty: The Sick, Disabled and Aged," by the Task Force on Economic Growth and Opportunity, an independent group set up under the sponsorship of the U. S. Chamber of Commerce.

The report cited Medicare as an example: "In

(Continued on page 119)

Announcing
EUTRON™
pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of moderate to severe hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.

Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

TM—TRADEMARK

New **EUTRON** extends your range of treatment in moderate to severe hypertension

A single product you can use even in the presence of congestive heart failure or edema

Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.

BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.

The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week — maximum reduction in seven to ten days.

Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

ABBOTT

Prescribing information for EUTRON

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

an attempt to help low-income aged people obtain health care at little personal cost, Medicare was attached to the tradition-bound Social Security program. As a result, Medicare will help millions of Americans who are not needy by any stretch of the imagination.

"It will be financed by the Social Security payroll tax, a highly regressive tax that places heaviest burdens, in relation to income, on low-income workers and on low-income consumers who pay higher prices to absorb the cost of payroll taxes levied on employers."

* * *

Measles incidence in 1965 was the lowest in recent years, according to the Public Health Service's Communicable Disease Center. Through the first 49 weeks of the year, 256,443 cases were reported, far below the average of more than 400,000 annual cases since 1960. There had been 478,518 cases in the first 49 weeks of 1964.

But PHS warned that, if past experience is repeated, major epidemics can be expected in many sections of the country during the first half of 1966.

* * *

The federal government is going to spend more on health and education programs in 1966—but not as much as originally expected, principally because of the Viet Nam war.

HEW Secretary John W. Gardner says 1966 would not be a "slowdown year" in his department because of the start of new programs in elementary and secondary education, Medicare, water pollution, disease control and other areas. But, he added, a certain slacking in other programs might be useful. He declined to identify specific projects. He said, however, that they "might be done better if they were started slowly."

Proposal for an Iowa Diabetes Association

Edward J. Hertko, M.D., 2932 Ingersoll Avenue, Des Moines 50312, the Iowa coordinator for the American Diabetes Association, wishes all physicians in the state who are interested in the establishing of an Iowa Diabetes Association to get in touch with him.

He points out that Iowa has about 20,000 to 30,000 diabetics, only half of whom are aware that they have the disease. The proposed organization could both see to it that care is provided for all known cases and help find those that are presently undiagnosed.

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Non-Dispensing Physicians Need Keep No Records Of Their Depressant or Stimulant Drugs

It now appears that the American Pharmaceutical Association's pamphlet "HR-2 and You," which was summarized in an item on page 686 of the December, 1965, JOURNAL is wrong in failing to emphasize that only the dispensing physician must make an inventory of the depressant and stimulant medications that he possesses on February 1, 1966, and must keep a current record of his supplies of them thereafter.

In a letter to Mr. Donald L. Taylor, executive vice-president of the Iowa Medical Society, dated January 7, 1966, Mr. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, said: "Recently, there has been some confusion as to what records physicians must keep. . . . Putting it simply, they are *not required* to keep records as a consequence of this law *unless, in the course of their practice, they dispense the drugs referred to and charge for them.* The law is quite clear on this, and I quote from that part of the Act relating to record-keeping:

> The provisions of paragraphs (1, Records) and (2, Inspection) of this subsection shall not apply to a licensed practitioner . . . with respect to any depressant or stimulant drug received, prepared, processed, administered, or dispensed by him in the course of his professional practice, unless such practitioner regularly engaged in dispensing any such drug or drugs to his patients for which they are charged, either separately or together with charges for other professional services.

"The key phrases in this paragraph are the words 'regularly engaged' and 'for which they are charged.'

"Further in this regard is a quote from the House Report of the Committee on Interstate and Foreign Commerce on HR-2 which became PL 89-74:

> The committee intends . . . to require record-keeping and to permit inspection in the case of those physicians who maintain a supply of pharmaceuticals or medicinals in their offices from which they compound prescriptions for their patients for a fee.

"The language of the Senate Committee Report is identical. Both committee reports stated that those required to keep records 'involve only a very small percentage of physicians.'

"The proposed regulations underscore this point, indicating that '. . . maintaining of small supplies of these drugs for dispensing or administering in the course of professional practice in emergency or special situations will not be considered as regularly engaged in dispensing for a fee.'

"For those physicians who, in the course of their practice, *regularly dispense drugs and charge for them,* certain records are required to be kept for three years, effective February 1, 1966. Included are: a complete accurate record of all depressant and stimulant drugs on hand February 1, 1966; a complete, accurate record of the kind and quantity of each drug received, sold, delivered or otherwise disposed of; the name, address (and registration number under Section 510 (e) of FDCA) of the person from whom the drugs were received, and to whom they were sold, delivered, dispensed or otherwise disposed of; and the date of the transaction. No separate form for these records will be required as long as the information specified is available.

"Summing up, under PL 89-74 physicians *do not* have to keep records *unless they regularly dispense* the drugs covered by the Act and charge for them."

QUESTIONS AND ANSWERS

1. What drugs are covered?

(a) Barbiturates
(b) Amphetamines
(c) Drugs designated by the Secretary of HEW as having a potential for abuse because of their stimulating or depressing effects on the central nervous system, or because of their hallucinogenic effects.

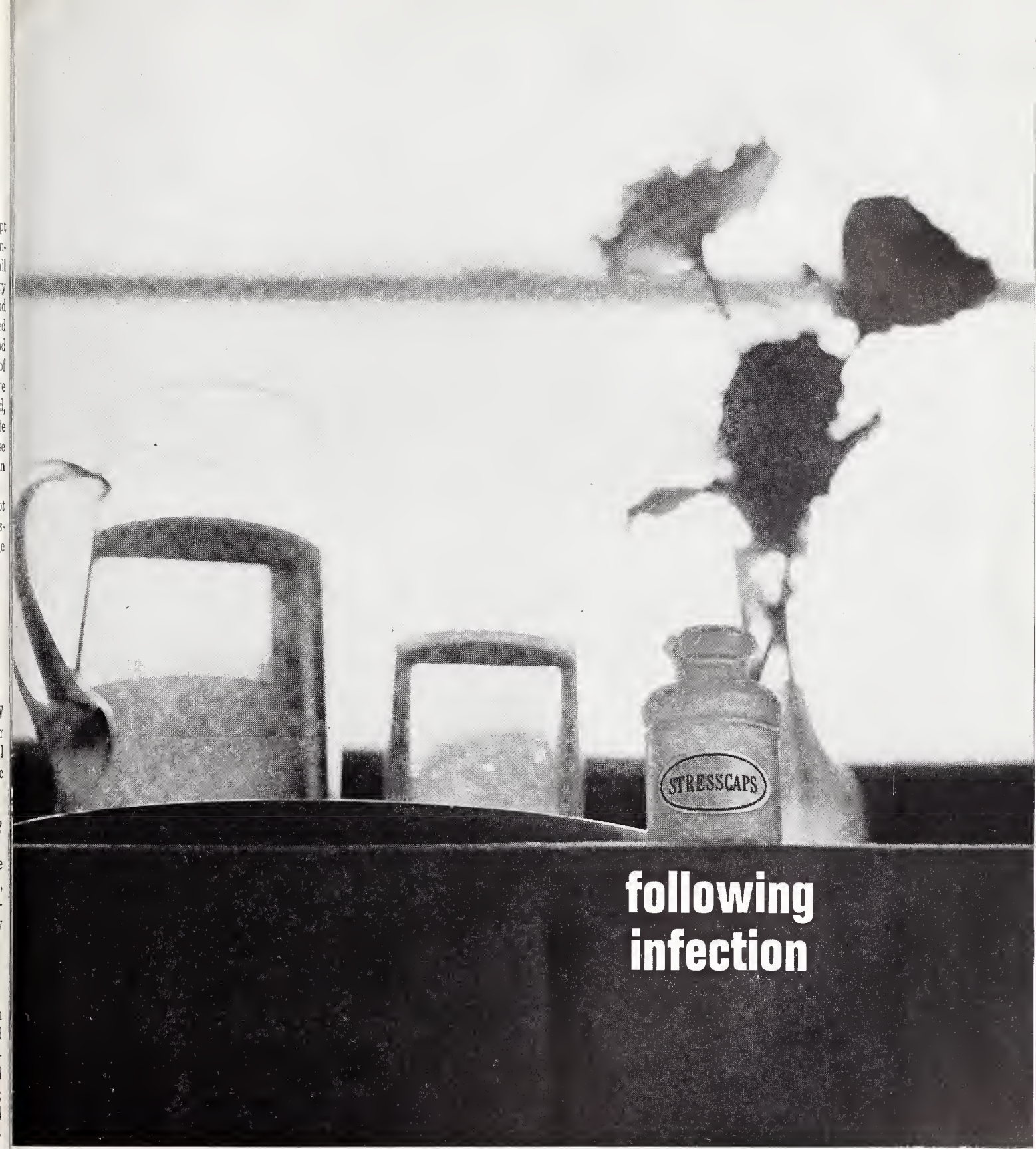
2. How does the Secretary add drugs to the list?

He may do so by regulation. However, there are provisions in the bill for hearings, judicial review, and an opportunity (at the discretion of the Secretary) for consultation with a non-federal advisory committee.

3. What is illegal possession?

The following may legally possess the drugs in the normal course of business: (a) Registered manufacturers, wholesalers, and suppliers of manufacturers; (b) Pharmacies, hospitals, clinics and public health agencies; (c) licensed practitioners; (d) Researchers, teachers, chemists, officers and employees of the United States, and a state government or a political subdivision of a state while acting in the course of their official duties; (e) Agents and employees of the above groups, including nurses acting under the supervision of a licensed practitioner; (f) Patients and members of their households (for personal use only); (g) Common carriers in the usual course of their business. Any other possession is unlawful.

(Continued on page 122)



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Vitamin B_{12} Crystalline	4 mcgm.
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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

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4. Do dispensing doctors have to keep records?

Yes, if they are regularly engaged in dispensing controlled drugs and charge for them either separately or as part of their professional services.

5. How about OTC and "combination" drugs?

The Secretary is required to exempt OTC drugs. Combination drugs shall be exempted by the Secretary if he finds that they are neither habit-forming nor have a potential for abuse or hallucinogenic effect.

6. Are oral prescriptions permitted?

Yes.

7. Are refills restricted?

Yes, a refillable prescription can't be filled (or refilled) more than six months after the date of its issue, and refillable prescriptions can be refilled only five times. After that, the prescription must be renewed, either orally or in writing.

8. What kinds of inspection are permitted?

At reasonable times, FDA inspectors may inspect any establishment where depressant or stimulant drugs are held, including having access to and copying records required by the Act.

9. What may an inspector do if he discovers a violation of the Act?

He may make arrests, serve warrants and seize records, contraband merchandise, vehicles or equipment.

10. What does the Act say about drug counterfeiting?

The Act specifically prohibits counterfeiting of *all* drugs. It provides for the seizure of counterfeit drugs and equipment used in their manufacture or distribution.

11. How does this law "fit" with existing state law?

This Act does not supersede state law unless state provisions are in direct conflict with it.

12. Is HEW prepared to enforce this law?

It will be soon. In the Congressional hearings, the Secretary said he would need $10 million and 500 men, 400 of whom will be field inspectors.

13. If state enforcement officers uncover evidence that someone has violated this Act, can they turn this evidence over to the federal government for prosecution?

Yes.

14. What are the penalties for violating the provisions of this Act?

First offense: one year or $1,000, or both. Second offense: three years or $10,000, or both. For sales to a person under 21 years of age, the penalties are: first offense—two years or $5,000 or both; second offense—six years or $15,000, or both.

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meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

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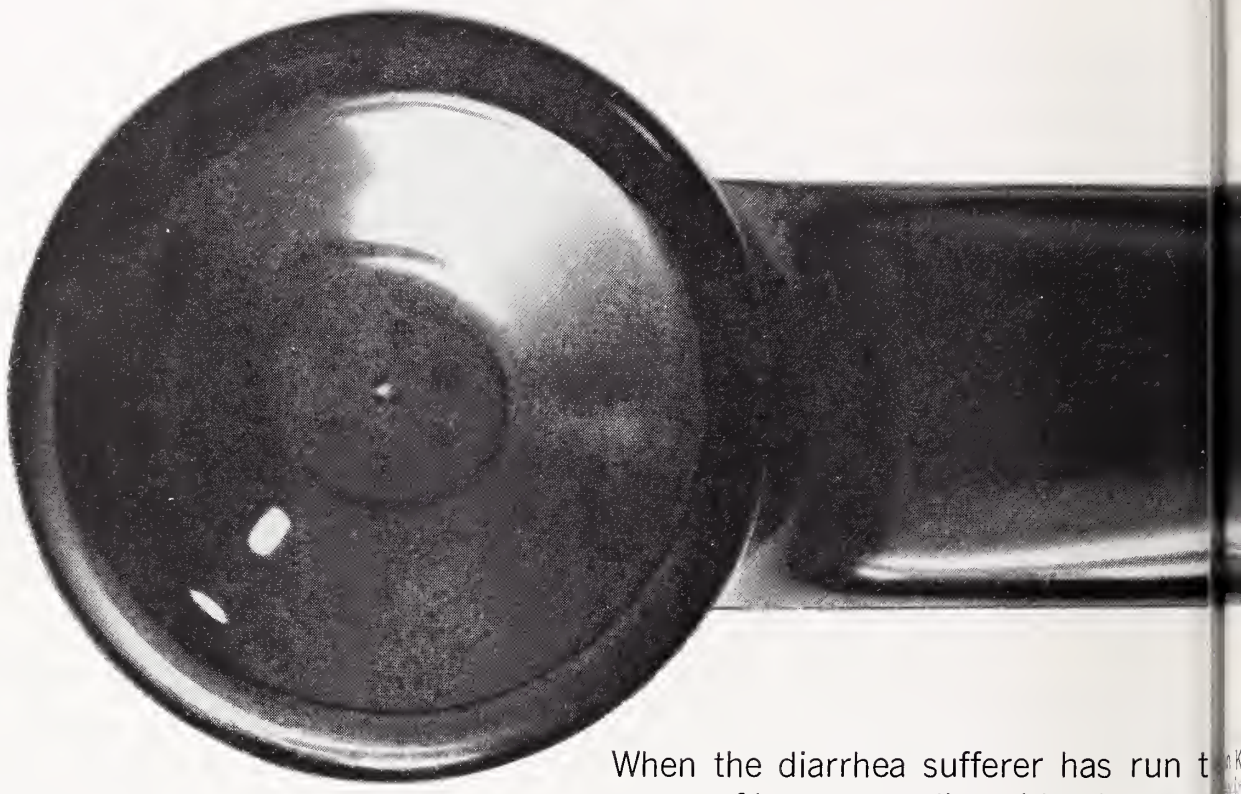

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Withhold if diverticulosis is present or suspect
Precautions: Sulfonamide: Continued use requi
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in K. Neomycin: Patient should be observed for ew infections due to bacteria or fungi. *Side Effects:* ulfonamide: Sensitivity reactions may occur (e.g., kin rashes, anemia, polyneuritis, fever; agranulo- ytosis with a fatal outcome has been reported). eduction of thiamine output in the feces and of tamin K synthesis has been observed. Neomycin: ausea, loose stools possible.

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Feb. 24-25 **Sioux Valley Medical Association, Annual Meeting,** Sheraton-Warrior Motor Inn, Sioux City.

CONTINENTAL U. S.

Feb. 2-3 **Seminar on Arthritis and Skeletal Injuries,** Hammack Auditorium, Menorah Medical Center, Kansas City, Missouri.

Feb. 2-6 **American College of Cardiology,** Conrad Hilton Hotel, Chicago.

Feb. 3-4 **Current Status of Cardiovascular Disease, University of Nebraska College of Medicine,** Epply Cancer Institute, Omaha.

Feb. 3-9 **Annual Congress on Medical Education,** Palmer House, Chicago.

Feb. 5 **Regional Meeting for Internists, Southern Illinois, American College of Physicians,** Hotel St. Nicholas, Springfield.

Feb. 6-11 **10th Annual Mid-Winter Medical Conference,** Boyne Mountain, Michigan.

Feb. 6-13 **Canadian-American Medical Dental Ski Association** (CAMDSA), The Lodge at Vail, Colorado.

Feb. 7-10 **Postgraduate Course in Current Concepts of Infectious Diseases, American College of Physicians,** McClellan Hall, Jefferson Medical College, Philadelphia.

Feb. 7 & 14 **Postgraduate Course, Psychiatric Aspects of Some Known Problems of General Medicine, Indiana University School of Medicine and Indiana Dept. of Mental Health,** Bartholomew County Hospital, Columbus, Indiana.

Feb. 9-11 **American Academy of Occupational Medicine,** Bellevue-Stratford Hotel, Philadelphia.

Feb. 11-12 **Regional Meeting, Internal Medicine Specialists, Northern California and Nevada, American College of Physicians,** Mark Thomas Inn, Monterey.

Feb. 14-17 **160th Annual Convention, Medical Society of the State of New York,** The Americana, New York City.

Feb. 14-18 **Clinical Application of Cardiopulmonary Physiology, American College of Chest Physicians,** Ambassador Hotel, Los Angeles.

Feb. 14-19 **Medical Genetics, American College of Physicians,** Johns Hopkins University School of Medicine, Baltimore.

Feb. 16 **Special Dermatological and E.E.N.T. Problems of the Elderly Patient, University of Wisconsin and State Medical Society,** University Hospitals, Madison.

Feb. 16-17 **Second National Voluntary Health Conference,** Continental Plaza Hotel, Chicago.

Feb. 17-18 **Community Psychiatry and the General Practitioner, University of Nebraska College of Medicine,** Nebraska Psychiatric Institute, Omaha.

Feb. 18-20 **Regional Meeting, Internal Medicine Specialists, American College of Physicians,** Biltmore Hotel, Santa Barbara.

Feb. 21-23 **22nd Annual Meeting, American Academy of Allergy,** Americana Hotel, New York.

Feb. 21-25 **Postgraduate Course, Cancer for the Internist, American College of Physicians,** Presbyterian-St. Luke's Hospital, Chicago.

Feb. 24-26 **Postgraduate Course on Operable Heart Disease,** Mayo Clinic, Rochester.

Feb. 25 **Disaster Medical Care Regional Meeting,** St. Francis Hotel, San Francisco.

Feb. 27-Mar. 4 **40th Congress, International Anesthesia Research Society,** Americana Hotel, Bal Harbour, Fla.

Feb. 28-Mar. 4 **The First Obstetrics & Gynecology Seminar Cruise** (Aboard the *S.S. Ariadne* Cruising the Atlantic and Bahama Waters), Fort Lauderdale.

Mar. 1-3 **31st Midwinter Clinical Session of the Colorado Medical Society,** Brown Palace Hotel, Denver.

Mar. 2-3 **Seminar on Metabolic Diseases,** Hammack Auditorium, Menorah Medical Center, Kansas City, Missouri.

Mar. 2-4 **Air Pollution Medical Research Conference,** Ambassador Hotel, Los Angeles.

Mar. 4-9 **55th Annual Meeting, International Academy of Pathology,** Statler Hilton Hotel, Cleveland.

Mar. 6 **Symposium on Relationship Between Emotional Stress Factors and Coronary Heart Disease,** Mount Sinai Hospital Auditorium, Minneapolis.

Mar. 7-10 **29th Annual Meeting of the New Orleans Graduate Medical Assembly,** Roosevelt Hotel, New Orleans.

Mar. 7-11 **Postgraduate Course on the Big Heart, American College of Psysicians,** Auditorium, Baylor University College of Medicine, Houston.

Mar. 9-11 **Postgraduate Course on Operable Heart Disease, American College of Cardiology,** Mount Sinai Hospital, New York.

Mar. 10-11 **5th National Symposium, Heart Association of Southeastern Pennsylvania,** Sheraton Hotel, Philadelphia.

Mar. 14-16 **Annual Meeting, Society of Toxicology,** Williamsburg, Virginia.

Mar. 16-18 **Postgraduate Course on Ultrasonic Diagnosis, University of Colorado School of Medicine,** Denver.

Mar. 18-19 **19th National Conference on Rural Health, AMA Council on Rural Health,** Broadmoor Hotel, Colorado Springs.

Mar. 18-20 **23rd Annual Meeting, American Psychosomatic Society,** Sheraton-Chicago Hotel, Chicago.

Mar. 20-23 **1966 Annual Scientific Assembly, California Medical Association,** Biltmore Hotel, Los Angeles.

Mar. 24-25 **Spring Conference on Narcotic Addiction, Illinois State Medical Society,** Sherman House, Chicago.

Mar. 22-23 **International Biomagnetic Symposium, University of Illinois College of Pharmacy,** Chicago.

Mar. 24 **Neurological Problems of the Elderly Patients, Sponsored by the University of Wisconsin and State Medical Society,** University Hospitals, Madison.

Mar. 24-26 **Conference on Pediatric and Adolescent Gynecology, New York Academy of Sciences,** Waldorf-Astoria Hotel, New York.

Mar. 26-30 **American Society of Abdominal Surgeons,** Sherman House, Chicago.

Mar. 28-31 **5th International Congress, Colleguim Internationale Neuro-Psychopharmacologicum,** Sheraton Park Hotel, Washington, D. C.

Mar. 30-31 **Symposium on Progress in Biochemistry and Therapeutics, "Enzymes in Mental Health,"** Carl Neuburg Society for International Scientific Relations, Grand Ballroom, Waldorf-Astoria Hotel, New York.

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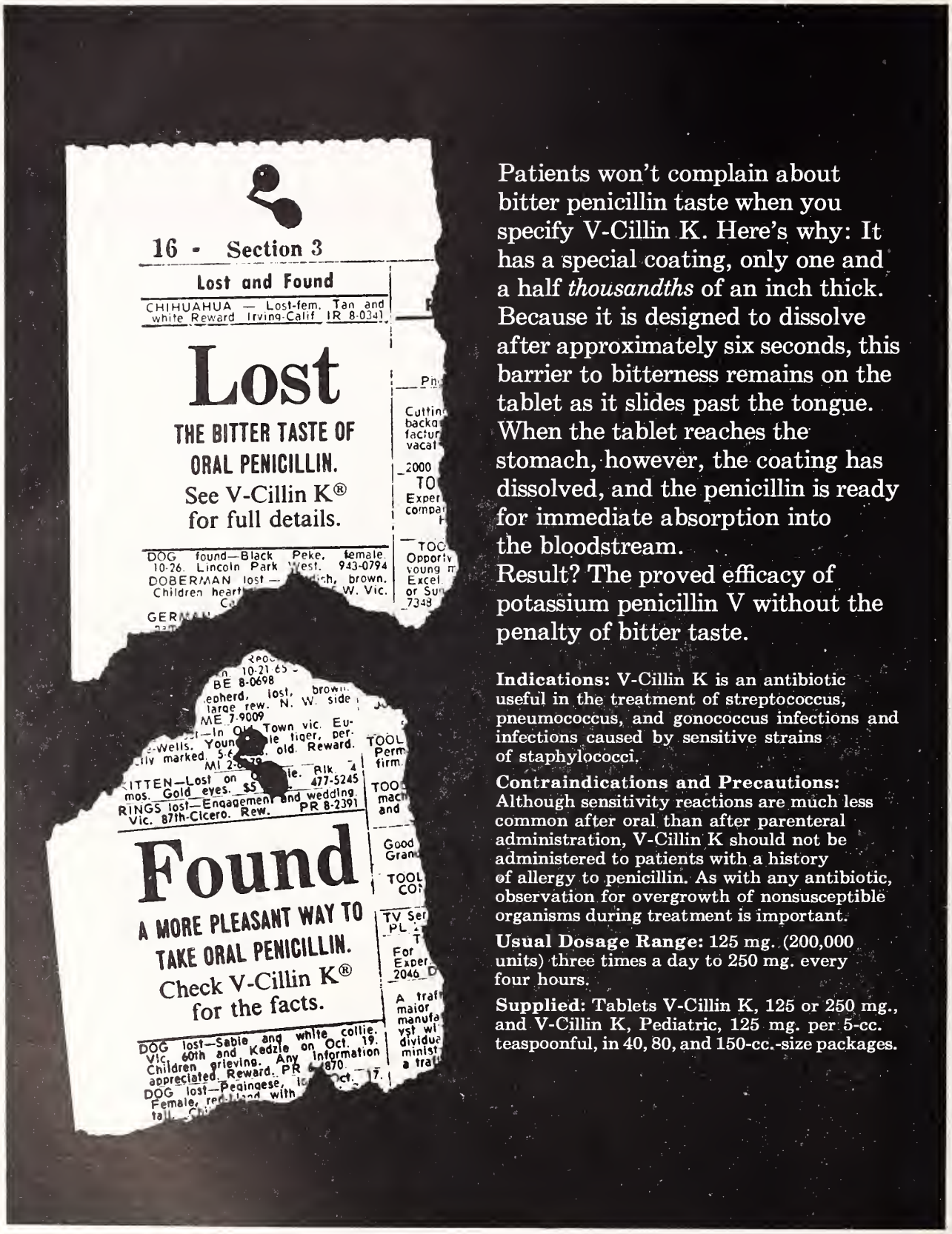

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Scientific Articles

Non-Neoplastic and Pre-Malignant Diseases of the Vulva

J. R. DAVIS, M.D., and D. S. LONGNECKER, M.D.,
With a Comment by W. C. KEETTEL, M.D.
Iowa City

THE EPITHELIUM AND STROMA of the vulva are the sites of a variety of non-neoplastic alterations as well as of premalignant epithelial change. There is some inconsistency in the nomenclature for those diseases, and consequently some confusion. It is the purpose of this short review to point out the reasons for the classification difficulties, and to propose ways in which the terminology can be sharpened. Thus, we hope, physicians can reach greater agreement as regards vulvar diseases.

A major consideration in the sphere of vulvar disease is the assessment of malignant growth potential. So as to avoid misunderstandings occasioned by nomenclature, certain loaded terms in common usage should be abandoned or made more precise through restricted application. Such terms as *kraurosis vulvae* and *leukoplakia* do not have the same meanings for all pathologists and clinicians. Misunderstandings arise from attempts to equate clinical conditions with particular patterns of histologic change. Unfortunately, there may be no reliable correlation between clinical appearance and morphologic findings.

Although it is not our primary purpose to propose a new classification, it will be necessary for us to list descriptive categories of morphologic change in non-neoplastic vulvar lesions. We developed our opinions as a result of reviewing 78 surgical specimens of vulva obtained from 64 patients at University Hospitals during the years 1950 through 1963. Two observers made morphologic assessments, purposely avoiding clinical evaluations and data until they had completed their categorizations. Specimens were classified as indicating major alterations of the epithelium alone, of the stroma alone, or of the stroma in combination with epithelial changes. Specimens with either non-specific ulceration or inflammatory cell infiltration of the stroma unaccompanied by either epithelial disturbance or stromal degeneration were placed in a miscellaneous category. The incidences and average patient ages for the several basic alterations are presented in Table 1.

The epithelial variations that did not include stromal alterations were those of hyperplasia, either an orderly type or an atypical epithelial proliferation.

The lesions of "atypical epithelial hyperplasia" were characterized by a carcinoma-*in-situ* type of disordered orientation and maturation involving the full thickness of one or more sites of the vulva (Figure 1). These included a spectrum of abnormal changes ranging from those encountered in low-potential pre-malignant growths (equivalent to senile keratosis) to those seen in high-potential pre-malignant variations (equivalent to Bowen's disease of the skin). Two of the cases exhibited a degree of surface maturation, although the deeper strata of epithelium were conspicuously dysplastic. Those lesions, too, were regarded as pre-cancerous and as having a moderate to high degree of cancerous potential if allowed to progress. Clinically, all 11 specimens had been said to exhibit "leuko-

Drs. Davis and Longnecker are assistant professors of pathology, and Dr. Keettel is professor and head of obstetrics and gynecology at the U. of I. College of Medicine.

TABLE I

SUMMARY OF 64 CASES OF NON-NEOPLASTIC AND PREMALIGNANT VULVAR DISEASES

Histopathology	No. Specimens	No. Patients	Average Patient Age (Years)
Epithelial hyperplasia			
Atypical	11	7	63
Orderly	11	11	54
Stromal degeneration (with):			
Orderly epithelial hyperplasia	7	6	61.2
Epithelial atrophy:	46	37	62.2
Mild stromal degeneration	(5)	(5)	58.2
Moderate stromal degeneration	(27)	(19)	62.6
Severe stromal degeneration	(14)	(13)	63.4
Miscellaneous	3	3	
Totals	78	64	

plakia," and following some form of excisional therapy, none of the patients had progressed to carcinoma. One of the patients had had a recurrence of a similar atypical hyperplasia 10 years after simple vulvectomy, but was free of disease 1½ years after local excision of the recurrence.

The specimens classified as "orderly epithelial hyperplasia" showed acanthosis and hyperkeratosis. There was no loss of maturation or disordered orientation (Figure 2). Pleomorphism of nuclei and mitotic activity were not features of this comparatively benign process as they were in the atypical category. Clinically, these cases presented with either thickened plaques (designated "leukoplakia" or "hyperkeratosis") or with atrophy of the vulva. The pathologic diagnosis included "leukoplakia," "hyperkeratosis," "acanthosis" and "chronic vulvitis," despite the structural similarity of the lesions. There were no degenerative changes of the stroma in any of the 11 specimens. No instances of recurrence, extension or malignant supervention occurred following either excision or incisional biopsy.

Another group of specimens exhibited morphologic changes in both the epithelium and the stroma. Stromal alterations consisted of edema,

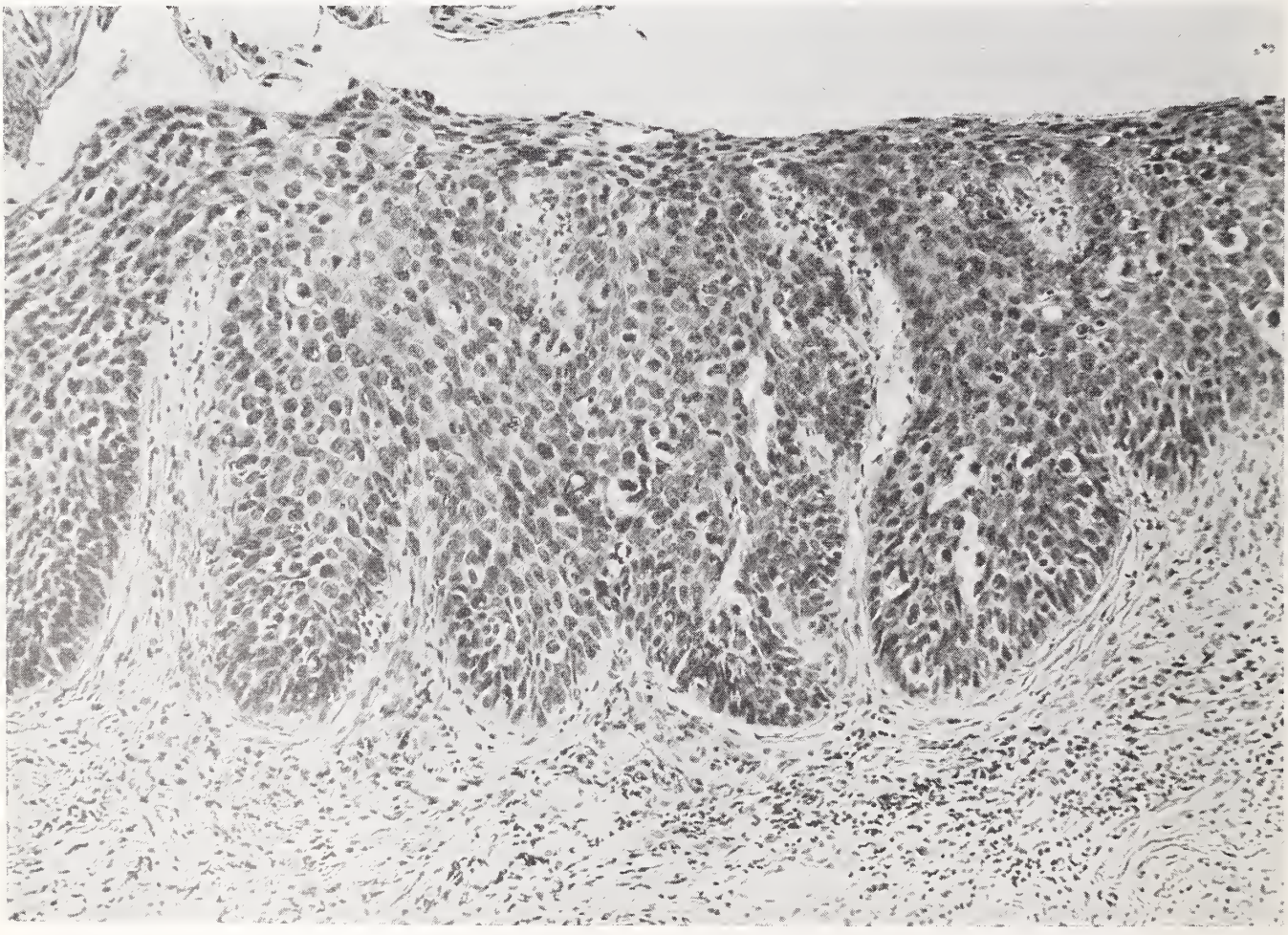

Figure 1. Atypical epithelial hyperplasia showing full-thickness involvement and diminished orientation (150 X).

hyalinization-homogenization of fibrous tissue, and usually a degree of mononuclear cell infiltration. The vascularity of the zone of stromal homogenization appeared diminished, and this probably is the explanation for the pale or white gross appearance of some of the lesions with atrophic epithelium. The group showing stromal changes could be further divided on the basis of epithelial atrophy or hyperplasia.

The orderly epithelial hyperplasia that had occurred with stromal degeneration resembled the epithelial hyperplasia in cases lacking the stromal degeneration. Mild basilar hyperplasia and a conspicuous component of acanthosis and hyperkeratosis were noted. Stromal degeneration was mild, and consisted of either edema or hyalinization of the superficial stromal zone with a variable degree of mixed inflammatory cell infiltration at the lower margin of the stromal degenerative zone (Figure 3). Clinically again, there had been a variability in the gross appearance of the alterations. Some had been considered atrophic, but most had been described as "leukoplakia" or "hyperkeratosis." No uniform diagnostic designation had been assigned to the surgical specimens reported by the several pathologists.

Specimens of stromal degeneration combined with epithelial atrophy were arbitrarily subdivided according to the degree of stromal degeneration. "Mild degeneration" was a patchy hyalinization or homogenization of the superficial stroma that might escape detection unless it were sought. "Moderate degeneration" was used in describing specimens in which the zone of stromal hyalinization was from one to two times the thickness of the overlying epithelium (Figure 4). "Severe stromal degeneration" was said to be present in specimens which had a very broad zone of stromal homogenization up to several times the thickness of the epithelium (Figure 5).

The 46 specimens with atrophic changes of both epithelium and stroma had been obtained from a total of 37 patients. Seven patients had had repeat biopsies, and one patient had been re-biopsied twice, thus providing an opportunity for a study of the course of the disease to a limited extent. In four of the eight cases there initially had been an orderly epithelial hyperplasia, but the dominant change found on subsequent biopsy was stromal homogenization combined with a waning of the epithelial proliferation. The other four cases, upon repeat biopsy, were found to show persistence of

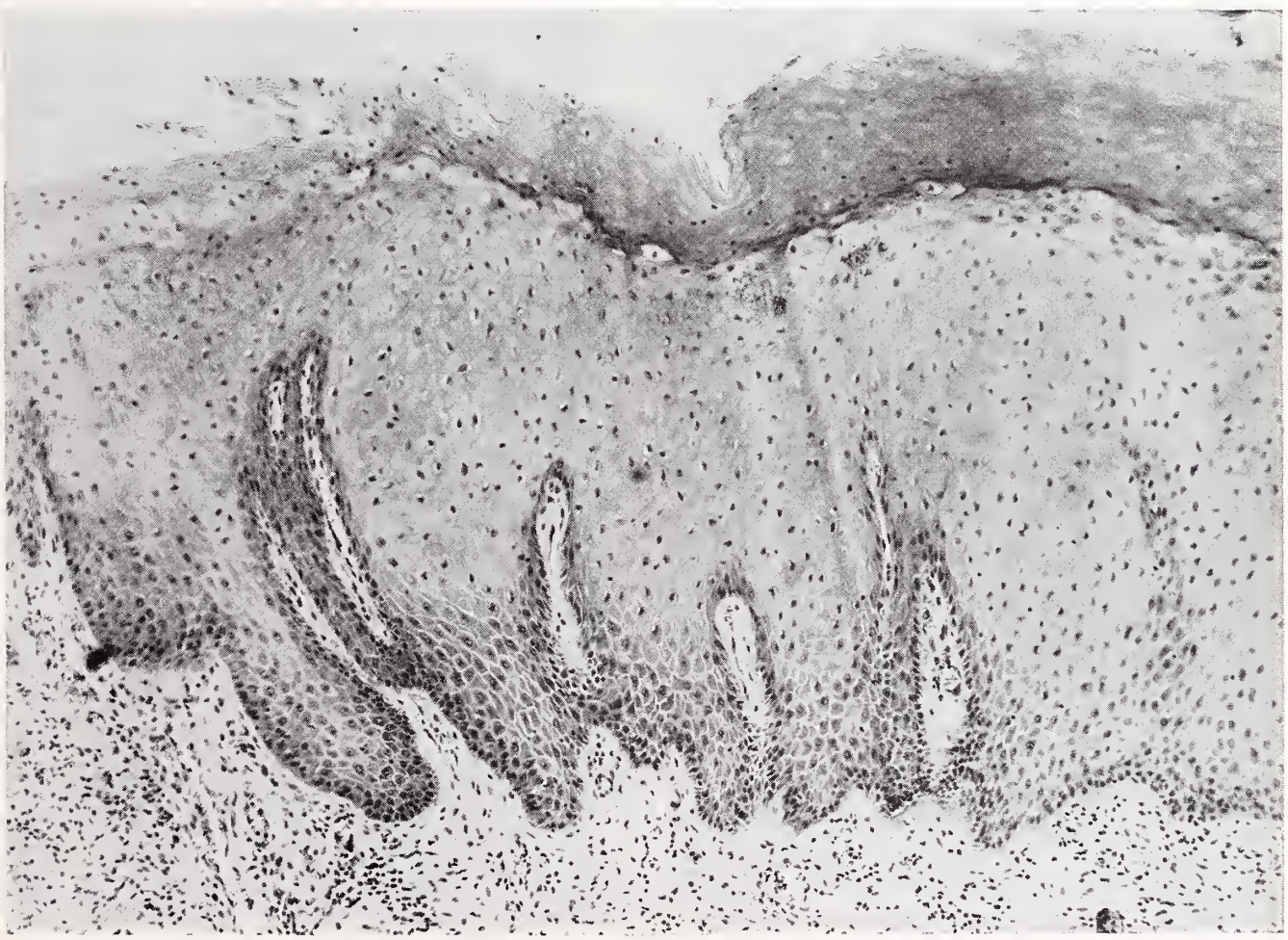

Figure 2. Orderly epithelial hyperplasia showing acanthosis and hyperkeratosis (100 X).

the degenerative stromal alteration, but significantly, none of those patients developed atypical epithelial hyperplasia.

The age range for the entire group of 37 patients classified as exhibiting stromal degeneration was 34 to 89 years, and the average was 62.2 years. When the group was subdivided by degree of dermal degeneration, the average ages were: "mild," 58.2; "moderate," 62.6; and "severe," 63.4 years. Many of the 37 patients had symmetrical vulvar involvement, but this was not a feature in the hyperplastic epithelial lesions. Sixteen had extravulvar involvement—generally perineal and perianal, but occasionally on thigh, chest and arms.

DISCUSSION

A review of terminology and classifications employed by prominent gynecologic pathologists and dermopathologists indicates the degree of confusion extant. The underlying major concern which observers share is the prevalence of precancerous lesions in vulvar abnormalities. Montgomery and Lever[1] consider leukoplakia as grade ½ carcinoma. Allen,[2] and Novak and Taussig[3] expect cancer to supervene in 50 per cent of patients with leukoplakic vulvitis. And Wallace and Nomland[4] feel that 25 per cent of leukoplakic patients will develop cancer.

There would be less confusion if there were a single definition of *leukoplakia* as an atypical epithelial hyperplasia, but unfortunately the term lacks histopathologic precision. In the series of patients just reviewed, the diagnosis of "leukoplakia" had been made by both clinicians and pathologists in cases which we classed as (1) atypical epithelial hyperplasia, (2) orderly epithelial hyperplasia either with or without stromal degeneration, and (3) epithelial and stromal atrophy.

It would be satisfactory, as Helwig[5] suggests, to use *leukoplakia* only to designate atypical forms of epithelial proliferation. Connotatively, then, it would indicate some degree of precancerous potential. An alternative would be to drop the term from histopathology altogether, and to substitute purely descriptive terminology clearly indicating the precancerous potential. Currently, we are not using leukoplakia as a histopathologic diagnosis because the problem of nomenclature remains unsolved.

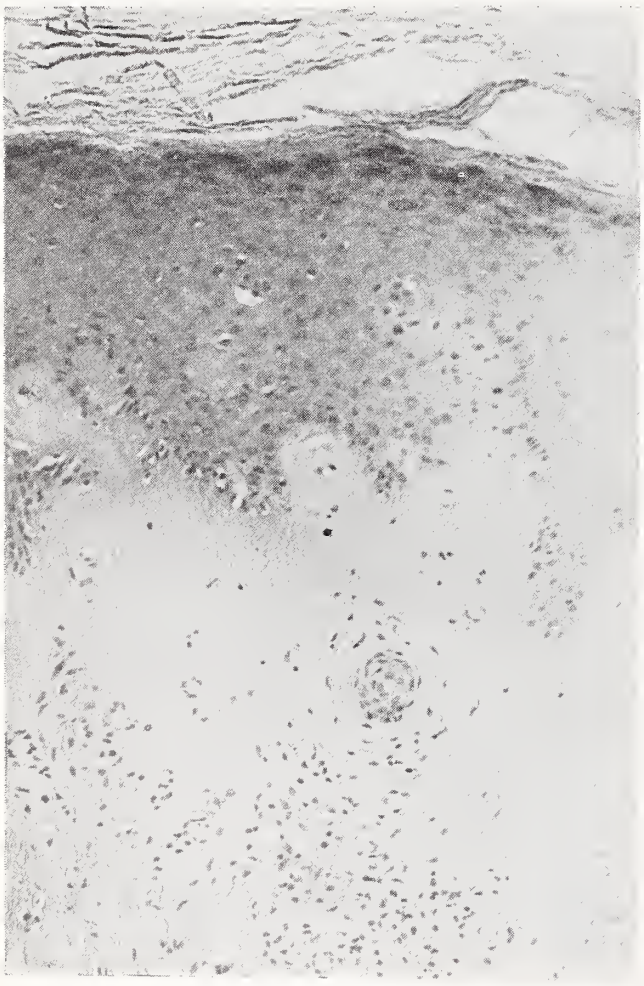

Figure 3. Mild stromal degeneration deep to the basement membrane, and associated orderly epithelial hyperplasia (150 X).

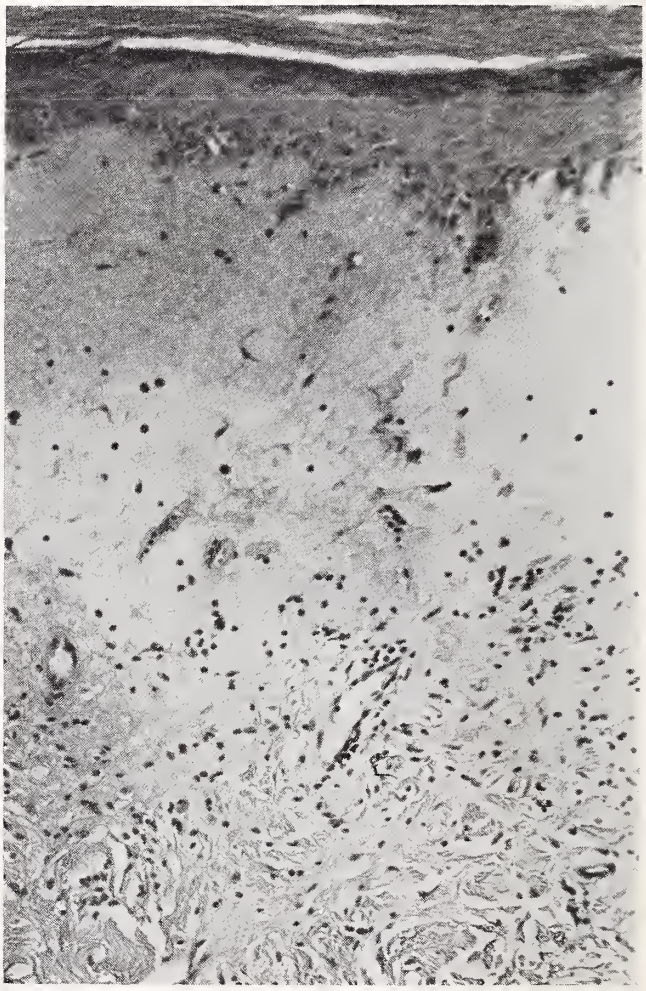

Figure 4. Atrophy of epithelium and moderate stromal degeneration (150 X).

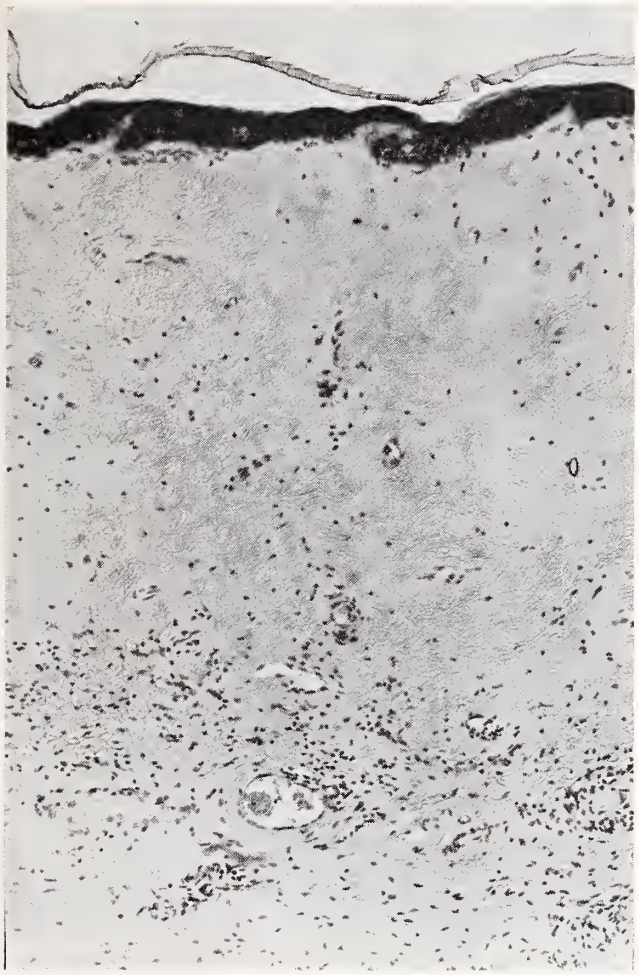

Figure 5. Advanced and severe degenerative homogenization of stroma associated with epithelial atrophy (90 X).

An orderly hyperplastic epithelium is not regarded as a frequent antecedent of cancer, although it too has been called leukoplakia.[3] It would seem preferable to separate these relatively harmless lesions from those harboring atypical epithelial growth.

Another term that causes difficulty is *kraurosis vulvae,* which indicates the clinically observable shrinkage of the vulva that is seen in elderly patients. Some observers regard that lesion as precancerous;[1, 2] others define it as hyperplastic and hyperkeratotic *lichen sclerosus et atrophicus;*[4] but many equate it structurally with the more common atrophic form of *lichen sclerosus et atrophicus.*[3, 5, 6] In view of these divergent interpretations, it would seem wise for the histopathologist to avoid the term *kraurosis vulvae* altogether, and to employ a purely descriptive term instead.

It is our view that *lichen sclerosus et atrophicus* constitutes an adequate description of degenerative changes in the stroma, including edema, hyalinization, homogenization and bandlike mononuclear-cell infiltration at the depth of the degenerative stromal change. Liquefactive basilar degeneration of the epithelium may occur. From age differences and from the progression of changes in serial biopsies in our material, there is a suggestion that orderly hyperplasia or acanthosis of the epithelium may occur in the early stages of lichenoid degeneration, but epithelial atrophy is usually encountered in the more fully developed form. It *does not* seem necessary to reserve the term *lichen sclerosus et atrophicus* for those cases in which there is extra-genital involvement. The histopathologic picture of lichenoid degeneration then might occur in the vulva in association with gross leukoplakic alteration, or in cases diagnosed clinically as senile vulvitis, kraurosis vulvae, chronic vulvitis or *lichen sclerosus et atrophicus.*

Some authors have pointed out the occasional supervention of cancer in patients with prior senile, atrophic or lichenoid lesions of the vulva. That observation does not necessarily indicate a cause-effect relationship, however. More likely it reflects the rare development from atrophic epithelium into *de novo* carcinoma. Epithelial atypism with loss of maturation and orientation, increased mitotic activity and nuclear pleomorphism would be the expected harbinger of such a precancerous change, whereas orderly or uniform atrophy of the epithelium probably is not a dangerous change. No instance of cancerous supervention occurred in our cases.

SUMMARY

Seventy-eight specimens of non-neoplastic and premalignant lesions of the vulva were reviewed in order to call attention to some difficulties in nomenclature. Classification should separate lesions with precancerous potential from the comparatively harmless vulvar alterations.

In our opinion, it is desirable for the histopathologist to avoid terms such as *kraurosis vulvae* and *leukoplakia* which lack morphologic precision. Lesions with epithelial atrophy and stromal hyalinization either should be given a descriptive designation or should be termed *"lichen sclerosus et atrophicus."* If a lesion is considered premalignant by virtue of dysplastic or atypical epithelial hyperplasia, diagnoses such as "atypical hyperplasia," "premalignant lesion" or "carcinoma *in situ*" would be satisfactory.

Reference has been made to the varied significances assigned to the vulvar lesions. Non-uniform terminology helps to perpetuate them.

COMMENT BY DR. W. C. KEETTEL

Drs. Davis and Longnecker are to be congratulated upon their attempt to clarify the nomenclature of vulvar pathology that is confusing both to the pathologist and to the clinician.

In a post-menopausal patient with a white vulvar lesion accompanied by perineal itching and irritation, many physicians are willing to make a clinical diagnosis of vulvar leukoplakia. Some even recommend a simple vulvectomy without a biopsy,

feeling confident of the diagnosis on the basis of the clinical appearance, and recommending the vulvectomy to prevent vulvar carcinoma and to provide symptomatic relief.

Fortunately, the majority of white lesions of the vulva *are not* premalignant and *do not require* such radical treatment. However, if one is to be certain of the diagnosis, every persistent white lesion—and especially any elevated, indurated or ulcerated areas—should have multiple-site biopsies. Ideally, the pathologist should describe the epithelial and/or stromal alterations in descriptive terms, indicating whether they are benign, premalignant or malignant.

I agree with Drs. Davis and Longnecker that the term *leukoplakia* either should be eliminated or should be restricted to the atypical forms of epithelial proliferation. The former course seems the more logical, since in common usage the term has come to mean a lesion that will prove to have been premalignant in 25 to 50 per cent of patients not treated by wide excision. Purely descriptive terminology would more clearly indicate the danger of histologic alteration. Patients with minor epithelial alterations could be treated medically and observed.

The term *kraurosis vulvae* should be discarded, for it does not designate a clinical or pathologic entity. Rather, it is only a poor descriptive term indicating dryness and shriveling of the vulva. *Lichen sclerosus et atrophicus* should be retained, for it designates a definite benign histologic change.

The trend in the last few years has been in the direction of a more conservative attitude toward the treatment of the vulvar lesion. Clinicians have come to recognize that the malignant potential is serious only when there are marked atypical changes of the epithelium. Medical management of the benign lesions will give excellent symptomatic relief, and malignant changes can be avoided through careful periodic examinations. A simple vulvectomy is a mutilating procedure, often producing urinary and sexual problems. Hence it should be restricted to cases in which there are widespread vulvar changes with marked atypical hyperplasia of the epithelium.

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The Wonderful World of Words

"Dr. Smith's x-ray" is a dangerous expression; "room 356 bed two's blood pressure" is confusing; "the new patient's white count" is careless. We have pleaded long to have a patient called by name, but it so often comes out "room 356 bed two," or "the emergency," or "this afternoon's case" or "the D and C."

The "emergency" that is scheduled on Saturday morning for Sunday surgery is a strange sort of emergency. "Physical examination *reveals,*" "The patient *denies*" and *the cicatrix* are all stilted and circumlocutional substitutions for simpler and better phrases. *Bibliography* where one means *references* is a wonderful illustration of this sort of thing.

There is a vast amount of nonmedical nonsense, too, as *stalemate* for *draw; alibi* for *excuse; presume* for *assume; cleansed* for *cleaned;* and *gambit* for *opening.*

Periphrasis, or putting things in a roundabout way, has engulfed latinisms, as *in situ* for *in its original place; per se* for *by itself; bona fide* for *in good faith;* and of course *per annum* for *a year. Biennial* or *biannual,* as well as *bimonthly,* will always send us, muttering, to the dictionary, often to find that the author has made the usual mistake. How much better are *half-yearly* and *two-yearly.*

What does it mean when an inquirer is told, "He is doing as well as can be expected"? Probably the prize example of saying nothing is "His condition is fair." *Fair* can sound good, and it may have an ominous ring. The one who is deceived by this kind of nonsense is oftener the speaker than the listener. "He is holding his own" means little, if anything; it does not sound good, though it seems to want to.

This kind of language becomes quite different when the patient has achieved national-or-better prominence. We are told, "The President is weaker," or "His condition is deteriorating," and we have learned to translate all of this back into *dying.* But what is the use of all this running away from saying what we mean?

Item: "The blood pressure is *stable.*" Now *stable* sounds good, but it means nothing. It was 70 and we should have preferred one fluctuating wildly at 120.

Item: "Prior to and following . . ." Isn't that "before and after"?

Item: "Acceptable risk." It all depends on who accepts it.

Item: "Satisfactory." To whom?

Item: "The prognosis is guarded."

That did it!

—From an editorial in NEBRASKA M.J., **51**:1-3, (Jan.) 1966.

Megaloblastic Anemia Associated With Jejunal Diverticula

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TAYLOR,[1] IN 1930, described the first case of megaloblastic anemia asociated with jejunal diverticula. Since then, a total of 25 cases have been reported. Two of these cases had other gastrointestinal disease present.[2, 3]

A discussion of the probable etiology of this syndrome, a review of the reported cases with special reference to malabsorption, and reports of two additional cases are to be presented.

CASE REPORT NO. 1

P. N., a 73-year-old Negro male was admitted to the medical service of the Jefferson-Davis Hospital with complaints of anorexia, malaise and postural syncopal attacks for two months. The review of systems and the past history were unremarkable except for a traumatic amputation of the left second and third fingers sustained 20 years prior to admission.

On physical examination, the blood pressure was 100 mm. Hg systolic and 70 diastolic; respiratory rate 20 per minute; pulse rate 95 per minute; and temperature 99° F. The patient was a chronically ill, moderately dehydrated Negro male who appeared his stated age. The conjunctivae were pale, and bilateral arcus senilis was present. Grade II atherosclerotic changes were observed on funduscopic examination. The tongue was normal in size and was papillated. Examinations of the heart and lungs were within normal limits except for scattered moist rales in the left base. The abdomen was scaphoid. A superficial papilloma was noted over the suprapubic region. The rectal examination was within normal limits. The extremities revealed an amputation of the left second and third fingers. Motor strength was equal throughout, and sensation, coordination, gait and stance were commensurate with the patient's age. The deep tendon reflexes were bilaterally present and equal, except for the absence of ankle jerks.

Laboratory data on admission included hemoglobin 4.0 Gm. per 100 cc., total red blood count 1,400,000 per cu. mm., total leukocyte count 7,150 per cu. mm., platelet count 74,000 per cu. mm., and reticulocyte count of 0.1 per cent. Red cell indices included MCV 114 cubic microns, MCH 40 micromicrograms and MCC 35.5 per cent. The urinalysis was normal. Gastric juice contained no free acid after histamine stimulation. Excretion of radioactive cobalamin was 7.7 per cent in 24 hours when administered without intrinsic factor, and 8.6 per cent when administered in conjunction with intrinsic factor. The red blood cells were macrocytic and hypochromic in the peripheral smear. The bone marrow was hyperplastic, with a predominance of megaloblasts. Electrophoresis of hemoglobin demonstrated only "A" hemoglobin to be present. Other laboratory data included PBI 6.5 micrograms per cent, total proteins 6.8 Gm. per cent, calcium 9.1 mg. per cent, phosphorus 4.0 mg. per cent, FBS 105 mg. per cent, cholesterol 135 mg. per cent and BUN 11 mg. per cent. The VDRL was non-reactive. Radioactive triolein uptake was 9.7 per cent. A radiograph of the chest demonstrated a patchy pneumonitis. An upper GI series demonstrated the presence of two gastric polyps and numerous jejunal diverticula. The barium enema was normal except for the presence of a bladder calculus.

On the second day of hospitalization, the patient was given 1,000 cc. of whole blood. He felt better and had no further syncopal attacks. Hemoglobin variations are depicted in Figure 1. The patient had a good reticulocyte response to vitamin B_{12} administered in conjunction with the Schilling test. Because of the jejunal diverticula, the patient was given demethylchlortetracycline HCl for five days. Thereafter he excreted 12 per cent of an oral dose of radioactive vitamin B_{12}. Surgery was recommended and refused, so he was discharged to be followed in the medicine clinic. A bone-marrow examination performed on the day of discharge was normoblastic.

CASE REPORT NO. 2

C. N., a 78-year-old white male, was admitted to the medical service of Ancker Hospital with the

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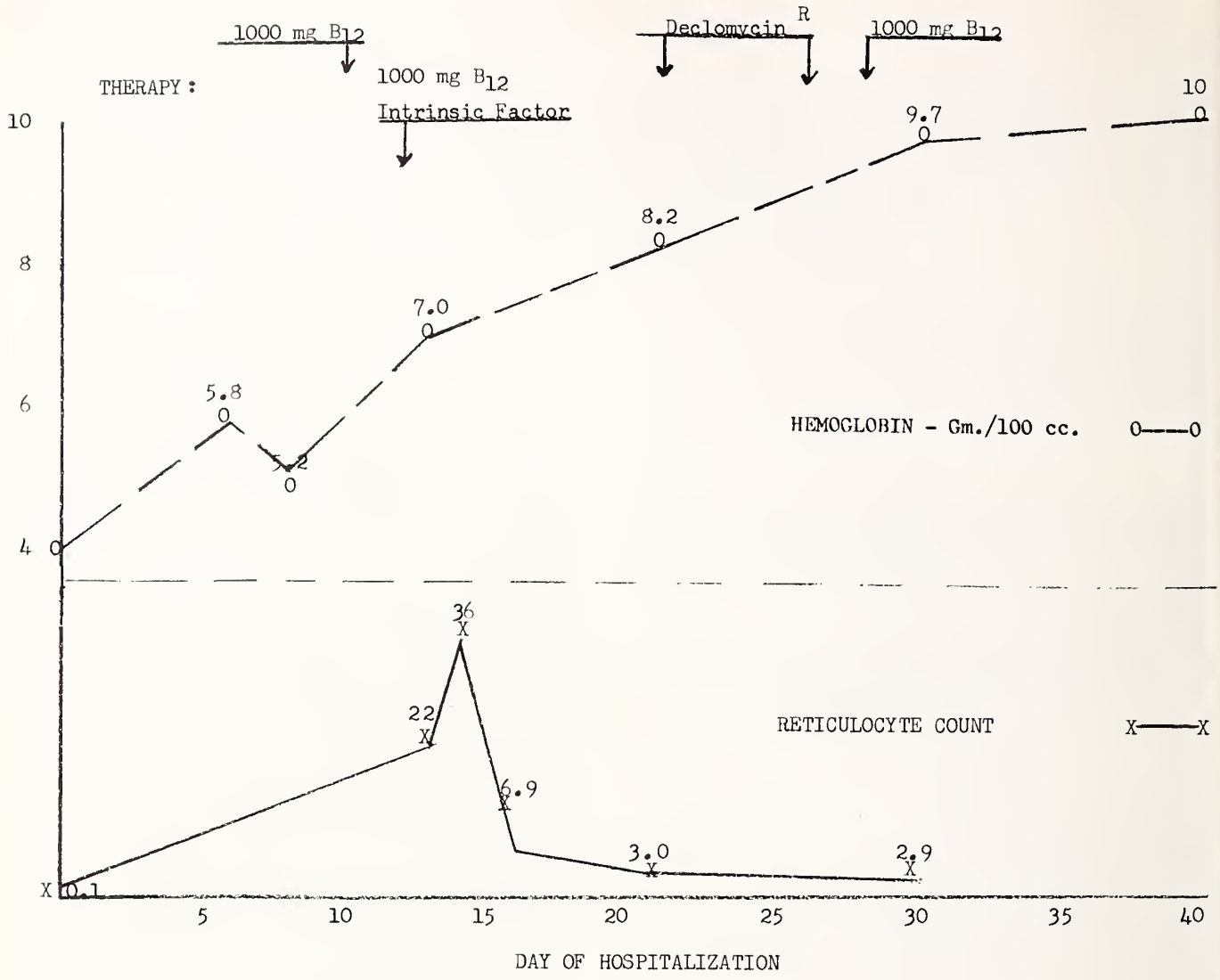

presenting diagnosis of cerebrovascular accident four days prior to admission. The past history was impossible to obtain because of the mental condition of the patient.

On physical examination, the blood pressure was 150 mm. Hg systolic and 90 diastolic, the pulse rate 110 per minute, the respiratory rate 22 per minute, and temperature 101.2° F. The patient was confused and uncooperative. The conjunctivae were pale. Examination of the fundi was within normal limits. The neck was slightly rigid. Examination of the lungs revealed coarse rhonchi, but no particular dullness was noted. Clinically, the heart was not enlarged. There was a Grade II/VI systolic murmur present, heard best at the apex. The abdominal examination was non-revealing. The skin showed several ecchymotic areas. A neurologic examination was impossible because of the uncooperative status of the patient.

Laboratory data on admission included hemoglobin 6.2 Gm. per 100 cc., hematocrit 17 per cent, reticulocyte count 1.0 per cent, total red blood cell count 1,380,000 per cu. mm., and total leukocyte count 1,400. The red blood cells were macrocytic and hypochromic on the peripheral smear. The platelet count was 46,000 per cu. mm. Other laboratory data included serum bilirubin 0.8 direct and 1.6 total, BUN 25.2 mg. per cent and on urinalysis a trace albumin.

The patient expired on the second day of hospitalization. At autopsy, multiple diverticuli measuring up to 3.0 cm. in greatest dimension were found, beginning 5 cm. proximal to the ligament of Trietz and extending 180 cm. distally.

DISCUSSION

The association of megaloblastic anemia and jejunal diverticula continues to remain an enigma to investigators. Of the 27 cases which have now been reported, only 16 have had concomitant steatorrhea. Fat absorption is depicted in Table 1. In only two instances was it a major clinical problem.[4, 5] It is unlikely that altered fat absorption is in itself the etiologic factor in preventing the absorption of vitamin B_{12}. If it were, one would expect to see a histologic picture similar to that seen in non-tropical sprue. This is not the case. In non-tropical sprue the villi are short and blunted, with

TABLE I

CASE REPORTS WITH REFERENCE TO FAT ABSORPTION IN PATIENTS WITH MEGALOBLASTIC ANEMIA AND SMALL BOWEL DIVERTICULA

Age	Sex	Fat Studies	Ca	P	A/G	Reference
54	F	No comment on Fat				Taylor
58	F	Terminal Ileilitis Clin. Steatorrhea				Paulley
69	F	3 yrs. post Gastric Resection Clin. Steatorrhea				Welbourn
60	F	87% Fat Absorption				Gellman
59	M	Clin. Steatorrhea				Scudamore
61	M	Absent Clin. Steatorrhea				Scudamore
79	F	Clin. Steatorrhea				Friedlander
64	F	85% Fat Absorption				Badenoch
72	F	88% Fat Absorption				Badenoch
58	M	82% Fat Absorption			3.6/2.3	Badenoch
46	F	45.8% Fat in Feces			2.9/3.0	Badenoch
85	M	Triolein 2.8%	8.4	2.5	4.2/1.9	Crawford
64	M	79% Fat Absorption	9.1	3.5	2.5/1.8	Watkinson
70	F	86% Fat Absorption	9.6	4.8		Blachford
71	F	Clin. Steatorrhea	11.1	2.8		Dick
60	M	Absent Clin. Steatorrhea				Halsted
59	M	Carotene 18 I U Clin. Steatorrhea			2.4/3.1	Krevans
70	M	Absent Clin. Steatorrhea				Lee
64	M	Triolein 10.1%			2.4/4.8	Polachek
75	F	Triolein 7.4%			2.0/2.8	Polachek
76	M	Triolein 5.6%			2.2/3.4	Polachek
39	F	Clin. Steatorrhea				Spang
59	F	Absent Clin. Steatorrhea				Townsend
79	F	Latent Clin. Steatorrhea				Townsend
80	F	Absent Clin. Steatorrhea				Townsend
73	M	Triolein 9.7%	9.1	4.0	3.8/3.0	Present Case

a loss of the micro-villi. There is an increase in columnar cells and in the width of the crypts of Lieberkuhn. The epithelium is not involved in diverticulosis and the blind-loop syndrome. However, the bacterial stasis in the area may produce an inflammatory reaction, with a cellular infiltration within the lamina propria.

The most accepted explanation for failure of vitamin B_{12} absorption is that it is taken up by the bacteria found in the small bowel diverticuli and blind loops.[6-9] It has been shown in rats that poor absorption of cyanocobalamin occurs in stimulated diverticuli.[8, 9] The role that the bacteria play in making vitamin B_{12} unavailable is further shown by the successful treatment of the anemia with a broad-spectrum antibiotic in case No. 1 and others.[10, 11] Surgical therapy, consisting of the resection of the diverticulum containing segments, has been successful.[2, 12]

SUMMARY

Two case reports of megaloblastic anemia associated with jejunal diverticula have been presented, and the relationship between fat malabsorption and this syndrome has been discussed.

Following antibiotic administration, the bowel was able to absorb enough vitamin B_{12} to produce a normal Schilling test.

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Emotional and Mental Symptoms in Private Medical Practice

A Survey of Prevalence, Treatment, and Referral in Iowa

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THE NON-PSYCHIATRISTS in private medical practice are one of the major sources of psychiatric referrals. A 1962 Iowa Mental Health Authority survey[1] found 61 per cent of private psychiatrists' patients had been referred by such physicians. Clearly, those doctors must examine many persons with emotional and mental symptoms, and determine in large measure their subsequent courses of treatment.

In 1964, as part of Iowa's Comprehensive Mental Health Plan, answers to three questions were sought through a survey of the state's private practitioners. They were these: 1. What part of private medical practice is devoted to the diagnosis and treatment of illnesses with important emotional components? 2. What emotional and mental symptoms do non-psychiatric private practitioners encounter most often? 3. What do these physicians do in the way of treatment or referral of patients with such symptoms?

DESCRIPTION OF SURVEY

The survey was limited to physicians in full-time private practice in Iowa. At the time of the survey, the AMA Distribution of Physicians[2] listed the number of licensed medical doctors residing in Iowa as 2,816. Of those, 713 were not in full-time private practice, and 211 listed their specialties as psychiatry, anesthesiology, pathology, radiology, occupational medicine, or "other." All these were excluded, leaving 1,892 private practitioners from whom the sample was drawn, either by the investigators' getting in touch with those physicians personally, or through psychiatrists in private practice who undertook to seek the cooperation of their non-psychiatric colleagues.

To meet the deadline of the Comprehensive Mental Health Plan study, the survey was closed when 291 physicians had completed their survey work. Of those physicians, 213 were general practitioners and 78 were non-psychiatric specialists. The sample thus represented 18.5 per cent of all general practitioners and 10.5 per cent of all specialists in private practice. Rural, town, and city areas in 68 of Iowa's 99 counties were proportionately represented.

A total of 29,412 patients were evaluated. Table 1 shows the age and sex distribution of this sample compared to the Iowa population. A disproportionately smaller percentage of children in the 0-14 age range, and a disproportionately greater percentage of adults in the 20-34 and 65-and-older age ranges were in the patient sample, but the percentages of persons in the 15-19, 35-44, and 45-64 age ranges in the patient sample were about the same as those in the total Iowa population.

Other surveys[3, 4] have shown that medical patients are predominantly female, and in this sample about 58 per cent were females. Females were not preponderant in the 0-14 age group, but in the 20-34 age range they exceeded males by two and one-half to one. The excess of females in the 20-34 range probably resulted from visits associated with pregnancy.

Three out of four patients (74 per cent) had been treated previously by the doctors who evaluated them for this survey. Seventy-eight per cent of the female and 69 per cent of the male patients returned to doctors who had treated them before. The older a patient was when evaluated, the more likely he or she was to be a return patient. For example, whereas 83 per cent of males 65 years and older were return patients, only 59 per cent of males 20-34 years old could be so classified.

The 291 participating doctors had gathered data for the survey over a period of several months, and the study was technically a period-prevalence field survey. Each of the doctors filled out individual evaluation forms on at least 100 consecutive different patients. The survey results, therefore, provide information about the prevalence of illness in patients, but they do not provide information about the proportion of practice time that doc-

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TABLE 1

AGE AND SEX COMPARISON OF THE SURVEY SAMPLE WITH THE IOWA POPULATION

Age Groups	Male		Female		Total	
	Survey Sample (N = 12,259) %	U. S. Census 1960 %	Survey Sample (N = 16,947) %	U. S. Census 1960 %	Survey Sample (N = 29,412) %	U. S. Census 1960 %
0-14	12.0	15.9	10.3	15.2	22.3	31.1
15-19	3.0	3.7	3.9	3.7	6.9	7.4
20-34	6.0	8.3	15.2	8.8	21.2	17.1
35-44	4.1	6.0	6.4	6.1	10.5	12.1
45-64	8.4	10.2	10.6	10.6	19.0	20.8
65+	6.3	5.2	9.2	6.3	15.5	11.5
Age not stated	1.9	..	2.0	..	3.9	..
Sex not stated	..	..	..	..	0.7	..
Total	41.7	49.3	57.6	50.7	100.0	100.0

tors spend with these patients, as might have been possible if the doctors had evaluated *consecutive* patients, rather than *consecutive different* patients.

Identifying data were obtained on each patient. The doctor reported his judgment about whether any important emotional or mental factor contributed to the patient's presenting illness, and if so, whether it constituted the major factor, or was one of several important factors in the illness. Hereafter in this report, for the sake of brevity, patients whose presenting illnesses included emotional or mental factors that were thought to have diagnostic importance will be called, "patients with an emotional component."

For his patients with an emotional component, the doctor checked a list of symptoms and of treatment and disposition alternatives. A glossary of the terms used in the symptoms check-list was supplied.

RESULTS

Prevalence of an Emotional Component in Medical Patients. Estimates of the prevalence of emotional disturbance in the general population[5, 6, 7] and in medical patients[3, 8, 9, 10] cover a wide range. Different approaches to the problem and different criteria for disturbance or illness make comparisons among studies extremely difficult. The doctors in this survey reported finding an emotional component in 5,438 (18.5 per cent) of their patients. No significant difference appeared between the reports of general practitioners and of specialists. The doctors rated the emotional component as one of the important factors in the illnesses of 15.2 per cent of their patients, and as the major factor in 3.3 per cent. Again there was little difference between the reports of general practitioners and of specialists.

As in other surveys of medical patients,[9, 10, 11] the highest prevalence rates for emotional disturbance in this survey were found in the middle adult years, with a peak of 35 per cent among females and 24 per cent among males in the 45-64 age range. Table 2 shows the prevalence rates for both sexes in the six age groups.

TABLE 2

PREVALENCE OF AN EMOTIONAL-MENTAL COMPONENT IN MEDICAL PATIENTS BY AGE AND SEX

Sex	0-14 %	15-19 %	20-34 %	35-44 %	45-64 %	65+ %
Female	4	12	18	31	35	30
Male	3	7	14	20	24	22

Twenty-two per cent of female and 14 per cent of male patients in all age groups were reported to have an emotional component in their illnesses. Among adult patients 20 years of age and older, an emotional component was reported in 24.6 per cent.

Two-thirds of all the patients with an emotional component were females, no matter whether the component was rated as "major" or as "important."

Symptom Distribution. For his patients with an emotional component, the physician checked a variety of the symptoms or syndromes listed on the patient-evaluation forms. More than one of the symptoms were checked for many of the patients, and a total of 7,611 symptoms were reported for the 5,438 patients. Anxiety-tension (40 per cent of all symptoms) was most frequently checked. Its frequency was greater than the combined total for the next three most frequently checked symptoms or syndromes—psychosomatic disorders (14 per cent), depression (14 per cent), and hypochondriasis (10 per cent). Brain disease accounted for

6 per cent of the symptoms or syndromes checked; alcoholism, 1.8 per cent; phobias or compulsions, 1.2 per cent; delusions or hallucinations, 0.8 per cent; anti-social behavior, 0.5 per cent; drug addiction, 0.4 per cent; and "other problems" such as school, marital and retirement problems, 7.0 per cent.

Because a sex difference was found in the prevalence of the emotional component, an analysis was made of sex differences by syndromes and symptoms. There was little difference between the percentages of male or female medical patients who had an emotional component and whom the doctors thought to have psychosomatic disorders (male 19.6, female 20.3), or hypochondriasis (male 13.0, female 14.4). It is an old clinical impression that women are more hypochondriacal than men, but the survey results indicate that men are just about as likely to become hypochondriacal when they are emotionally disturbed. The difference in frequency between the sexes, as seen clinically, is a consequence of the fact that women are more susceptible to minor emotional disturbances, and perhaps of the fact that they are more willing to see a doctor about such minor disturbances.

Neither was there much difference between the sexes as regards the following symptoms and syndromes which are usually associated with major psychiatric disturbances: phobias or compulsions (male 1.4, female 1.8 per cent); delusions or hallucinations (male 1.4, female 1.0 per cent); antisocial behavior (male 1.0, female 0.6 per cent); and drug addiction (male 0.3, female 0.6 per cent).

On the other hand, there were some symptoms for which there were considerable differences in the frequencies for men and for women. There was a higher percentage of males with a component with alcoholism (males 6.1, females 1.0 per cent) and with brain disease (males 12.8, females 6.4 per cent), and a higher percentage of females with a component with anxiety-tension (males 49.3, females 58.6 per cent), with depression (males 15.8, females 20.4 per cent), and with "other problems" (males 7.2, females 11.8 per cent).

Because the prevalence of an emotional component varied with age, a study was made of possible age-range differences by symptoms and syndromes. Table 3 shows the prevalences of the various symptoms and syndromes in the patients in a given age range who had an emotional component. For example, of all the patients with an emotional component in the age range 65-years-and-over, 24.5 per cent showed depression.

Anxiety-tension, either as a primary symptom or as a reaction to physical disease, was prominent in all age groups of medical patients with an emotional component.

There was a noteworthy constancy of psychosomatic disorder among such patients in the adult age groups. The prevalence of depression, however, increased with age, as did that of hypochondriasis, though not so markedly. Alcoholism showed a peak in the later years. Brain disease was most prominent among patients 65 and over, and antisocial behavior was most frequent in adolescents.

TABLE 3

PATIENTS WITH AN EMOTIONAL-MENTAL COMPONENT, PER CENT SHOWING SYMPTOMS BY AGE GROUPS

Symptoms Checked	0-14 %	15-19 %	20-34 %	35-44 %	45-64 %	65+ %
Anxiety or tension	52.3	56.2	63.7	62.1	57.7	42.7
Psychosomatic	16.7	21.1	20.8	22.2	22.3	15.2
Depression	1.7	8.8	16.4	17.5	21.0	24.5
Hypochondriasis	3.7	9.8	10.0	14.1	16.5	16.0
Brain disease	8.8	3.6	2.2	1.0	4.0	26.3
Alcoholism	0.0	0.0	1.2	3.1	4.7	1.4
Phobias or compulsions	1.6	2.6	2.3	2.1	1.5	0.7
Delusions or hallucinations	0.0	0.5	0.6	1.2	0.9	2.0
Antisocial behavior	2.5	4.1	1.3	0.5	0.5	0.0
Drug addiction	0.0	0.0	0.3	0.7	0.6	0.5
Other problems	18.0	21.6	13.7	13.2	7.3	6.8
Symptoms not stated	8.8	6.7	6.4	7.4	5.1	4.3

In summary, the symptom-distribution data from this study support Shepherd's finding[9] that the prevalence of minor emotional disturbance in medical patients is high, but that the prevalence of major psychiatric disorder in them is low.

Treatment and Referral. Nearly 85 per cent of the patients with an emotional-mental component were treated by their doctors; 8 per cent were not treated; and in 7 per cent of cases the disposition was not stated. Of those who were treated, 27 per cent were counselled; 21 per cent received medication; and 52 per cent received both counselling and medication.

Referral was advised for approximately 11 per cent of patients with an emotional component. And of those 11 per cent, slightly more than one-half refused referral. Fifty-seven per cent of females, as compared to 43 per cent of males refused referral. This difference between sexes is significant at the .01 level of confidence.

The disposition of patients judged to have either an important or a major emotional component shows that the physicians had a greater tendency to refer patients having a major component, as might have been expected.

More than one-third of the patients who accepted referral were referred to private psychiatrists. Table 4 also shows that another third were referred to psychiatric clinics and hospitals—mainly those which are university-affiliated or community-, state-, or federally-supported—and that only a small proportion were sent directly to private institutions. Not quite half of the remaining third of these patients were sent to non-psychiatric

TABLE 4

REFERRAL OF PATIENTS WITH EMOTIONAL-MENTAL COMPONENT BY GP'S AND BY SPECIALISTS

Referrals To	GP's	Specialists	Total	%
1. Private psychiatrist	56	41	97	35.7
2. University psychiatric hospital	20	7	27	9.9
3. Community psychiatric clinic	16	7	23	8.5
4. State hospital clinic	17	2	19	7.0
5. Private physician	12	4	16	5.9
6. VA hospital clinic	12	2	14	5.1
7. Private or university hospital	11	2	13	4.8
8. Mayo Clinic	8	1	9	3.3
9. Psychiatric ward in private hospital	4	4	8	2.9
10. Social agency	4	3	7	2.6
11. State facility or clinic for mentally retarded or physically handicapped	5	1	6	2.2
12. Clergy	1	1	2	0.7
13. Other	7	1	8	2.9
14. Not stated	16	7	23	8.5
Total	189	83	272	100.0%

specialists, specialty clinics or general medical hospitals.

A marked difference was seen in the referral patterns of specialists and of general practitioners. Forty-nine per cent of specialists' referrals, as compared to 30 per cent of general practitioners' referrals, were to private psychiatrists. Twenty-six per cent of specialists' referrals and 36 per cent of general practitioners' referrals were to psychiatric clinics and hospitals.

PRACTITIONERS' RATINGS OF THEIR UNDERGRADUATE PSYCHIATRIC TRAINING

In addition to the information about their patients, the participating doctors provided data about their professional careers, and were asked for opinions, based on their professional experience, regarding the adequacy of their training in psychiatry, and for suggestions regarding changes in such training.

The doctors split about evenly on the question of the adequacy of their training in the diagnosis and management of patients with emotional disturbance. Table 5 shows that nearly 47 per cent of the doctors thought their training in psychiatry had been adequate, and that 51 per cent thought it had been inadequate. More of the recent graduates than of the older men considered their training adequate: 62 per cent of the 1954-63 graduates thought their training had been adequate, whereas only 27 per cent of those who graduated before 1934 were satisfied with what they had been taught. There was no difference between general practitioners and specialists as regards estimates of training adequacy.

Sixty per cent of the doctors offered one or more suggestions for changes in training—twice as many coming from the doctors who regarded their training as having been inadequate. The most frequent single suggestion, made by 51 per cent of the physicians offering suggestions, was for greater emphasis on the office management of emotional problems, including practical clinical experience in supportive psychotherapy, counselling or guidance. Going along with this, many doctors wanted a reduction of emphasis on hospitalized patients. Twenty per cent recommended more teaching about psychosomatic disorders and about emotional reactions to physical illness, and 17 per cent suggested more time for psychiatry in the medical school curriculum. These proposals accounted for three-fourths of all the suggestions.

The next most frequent suggestions were for more integration of psychiatry with other teaching departments, for psychiatric postgraduate courses, for more child psychiatry, and for somehow increasing medical students' interest in the emotional problems of patients.

The Doctors' Comments. The doctors commented freely about their medical school training in psychiatry. A doctor who graduated more than 30 years ago said, "When I went to medical school, we considered psychiatry a thing apart, and from what I have seen, student attitudes have not

TABLE 5

PHYSICIANS' JUDGMENT OF THE ADEQUACY OF THEIR PSYCHIATRIC TRAINING

Year of Medical School Graduation	Adequate		Inadequate		No Reply		Total	
	No.	%	No.	%	No.	%	No.	%
1954-1963	59	62.1	36	37.9	0	0.0	95	100.0
1944-1953	45	48.4	45	48.4	3	3.2	93	100.0
1934-1943	23	32.9	46	65.7	1	1.4	70	100.0
1933 & before	9	27.3	22	66.7	2	6.0	33	100.0
Total	136	46.7%	149	51.2%	6	2.1%	291	100.0%

changed greatly." Another who graduated about that time said, "Psychiatry was a relatively minor course when I went to school, consisting of a series of lectures and visits to two state hospitals for clinics lasting one day. I felt almost completely unprepared after the course."

One doctor said, "I didn't feel very confident to handle emotional problems when I left medical school, and I still don't." A pediatrician volunteered, "Most of what I use, I learned after I graduated." A general practitioner wrote, "The most valuable training I had in psychiatry was part of my flight-surgeon training in the Navy."

Several practitioners who believed that their psychiatric training in medical school had been inadequate told about learning, after graduation, to manage patients with emotional symptoms. "It is hard in medical school to realize the number of patients with psychosomatic complaints," said one doctor, "because most of them are never seen in University settings. Experience seems to prove a good teacher in this field." A similar attitude toward on-the-job training was even more wryly expressed by another doctor: "After 20 years, I recall that the emphasis was placed on the various psychoses. The majority of cases I see are merely psychosomatic . . . for which we had only a minimum of instruction. It may have been recognized that these problems were best handled by experience."

Another doctor said that although he believes medical students should be taught "some way to get more insight in picking up symptoms that are related to emotional problems, this only comes from seeing many patients." He wondered whether "more emphasis could be placed on picking up these symptoms that the student sees in other departments."

Many physicians believed all medical school departments should emphasize psychological factors. A urologist who believed students should have a broader understanding of psychodynamics said, "We see impotence and frigidity, and about the only experience we have had with these problems is usually personal." An internist said, "Certainly during the years that I attended medical school, insufficient attention was paid either to the effects of stress in producing organic disease, or to the effects of organic disease in producing psychiatric disorder." "There should be more of an attempt to integrate psychiatric training into the teaching that goes along with other departments," said another doctor, and he concluded, "In medical school we were constantly admonished to view and treat the patient as a whole, but apparently the instructors had difficulty in tying all these things together."

The doctors recommended devoting more of the students' time to psychiatry, and wanted that time spent on topics and training that would prove useful in office practice. Many doctors said that psychoses had been adequately taught, but because non-psychiatrists refer most such cases, the time spent with hospitalized patients would have been better spent with outpatients such as they see in their practices. An internist offered this opinion, "A marked number of patients in private practice are in need of some care for emotional problems. These include both those with organic disease and those without organic disease. Because of the lack of psychiatrists, the private practitioner must handle most of these cases. A much more practical approach could be given to the medical student for handling these problems." Another internist specified "more student experience and training in patient interviewing and office management." A pediatrician declared, "The need is for technics of counselling." A general practitioner said "More time should be spent dealing with anxiety, in marriage counselling, in handling hypochondriasis and alcoholism, and in child guidance." Another stated, "Students need to find which patients can be adequately treated as outpatients in doctors' offices."

Even though many of the doctors believed their training had been inadequate, they undertook to treat most of their patients' minor emotional illnesses and symptoms—not because there were no psychiatrists available, but because they wanted to meet one of the responsibilities which they accept as a part of medical practice, a responsibility which many wish they could meet more competently. Said one obstetrician, "I do think we could be of service to our anxious patients if we but knew what to do for them." A general practitioner added, "It can be done, but in medical school, unfortunately, most of us didn't learn how." One of the doctors suggested: "This is one reason why so many doctors move after starting practice, and why many of them leave private practice."

In summary, the doctors proposing changes in medical-school training want less emphasis on severe psychiatric disorders requiring hospitalization. They believe students should have more teaching about the less-disturbed patients, particularly those with psychophysiologic symptoms and emotional reactions to physical illness. Most important of all, they recommend actual training experience to develop the skills in interviewing, counselling, and supportive psychotherapy that one needs if he is to practice good medicine.

SUMMARY AND CONCLUSION

This paper presents the results of a survey of full-time private medical practitioners in Iowa regarding the prevalence of emotional symptoms found in their patients, and regarding the disposition of those patients. It also presents comments by the practitioners on the adequacy of their psychiatric training. Two hundred ninety-one physicians reported on over 29,000 patients.

The main results are:

1. The physicians reported an emotional component in 18.5 per cent of their patients. This com-

ponent was judged to be an important factor in the illnesses of 15.2 per cent, and as the major factor in 3.3 per cent of the patients. Twenty-two per cent of females and 14 per cent of males were reported to have emotional components. The percentages of emotional disturbance peaked, for both men and women, in the 45-64 age range.

2. The most frequently appearing symptoms or syndromes were anxiety-tension, 40 per cent; psychosomatic complaints, 14 per cent; depression, 14 per cent; and hypochondriasis, 10 per cent. Males were higher on alcoholism and brain disease; females on anxiety-tension and depression.

3. These physicians, themselves, treated 85 per cent of the patients with emotional components. Treatment consisted of medication, counselling or combinations of the two. Referral was advised for 11 per cent of patients with emotional symptoms, and more of them refused referral than accepted it. Females refused referral more often than males. About one-third of the patients referred were sent to private psychiatrists. The other referrals were widely distributed among non-psychiatric physicians and state and local agencies. Specialists referred a greater percentage of the patients to private psychiatrists than did general practitioners.

4. Forty-seven per cent of the physicians regarded their psychiatric training in medical school as having been adequate, whereas 51 per cent thought it had been inadequate. They thought there should have been more training in practical office management of patients, including supportive psychotherapy and counselling, and less emphasis on the major psychoses.

Private medical practitioners have always been, and still are, one of the largest sources of manpower in this country for the treatment of mental and emotional conditions. In view of the high frequency of emotional and mental disorders among patients found in the practice of medicine, and in view of the fact that a large majority of these patients are treated by the non-psychiatrists, medical educators should give more attention to improving the training of general physicians and non-psychiatric specialists in the treatment of these patients.

ACKNOWLEDGMENTS

This study was supported in part by the Comprehensive Mental Health Plan for Iowa.

We wish to thank the 291 physicians who took part in this survey, and to thank the Iowa Psychiatric Society, the Iowa Chapter of the American Academy of General Practice, and the many cooperating county medical societies for the help of their members.

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Regular Tuberculosis Tests for Children

The American Academy of Pediatrics and the American College of Chest Physicians have recommended that all children between the ages of six months and one year be tested for tuberculosis. The tests should be given, if possible, before the child has been vaccinated against measles or smallpox.

The two organizations emphasize that tuberculous infection in children is still prevalent, and that testing for tuberculosis "should be repeated annually up to four years of age, and thereafter every two years, depending on the risk of exposure of the child and the prevalence of tuberculosis in the population group." The statement also notes that children infected with tuberculosis "should be treated with well-known methods to prevent them from developing tuberculous complecations during childhood," comments that isoniazid has been especially effective in young children, and says that all necessary procedures are now available to accomplish the elimination of tuberculosis in all age groups.

Pacific Tours

The Pan-Pacific Surgical Association will hold its Tenth Congress, in Honolulu, and its Second Mobile Educational Seminars in countries bordering the Pacific Ocean next fall. Part I, the Honolulu meeting, will take place at the Princess Kaiulani Hotel from September 20 to September 28. Parts II and III will leave Hawaii on September 28 and travel to Japan and Hong Kong. From there, Part II will return to San Francisco, arriving on October 10, in time for the meeting of the American College of Surgeons. Part III will continue on from Hong Kong to the Philippines, Thailand, India, Singapore, Australia and New Zealand, returning to Hawaii on November 1. More than 450 surgeons from the U. S. and 22 foreign countries will compose the faculty.

For further information, address the Association at Room 236 Alexander Young Building, Honolulu 96813.

Observations on Snakebites in Iowa

HENRY M. PARRISH, M.D., Dr. P.H.
Columbia, Missouri

Poisonous snakebites are not commonplace in Iowa. However, they occur frequently in other states in the West North Central Region of the United States. The annual snakebite rates per 100,000 population for states in this region were: Missouri 5.42, Kansas 5.28, South Dakota 4.56, Nebraska 3.26, North Dakota 0.79, Iowa 0.33 and Minnesota 0.09. Very little is known about snakebites in Iowa. According to Nitzke,[1] "No figures are available to show which type of snake has produced the most bites in Iowa, and for that matter, no figures have been compiled on the number of bites from any source in Iowa." The purpose of this study is to provide these missing figures concerning the incidence of poisonous snakebites in Iowa and the who, when, why and where of snakebite accidents in Iowa.

POISONOUS SNAKES

According to Conant,[2] the following six species of poisonous snakes are indigenous to Iowa: the northern copperhead *(Agkistrodon contortrix mokeson)*, the southern copperhead *(Agkistrodon contortrix contortrix)*, the timber rattlesnake *(Crotalus horridus horridus)*, the prairie rattlesnake *(Crotalus viridis viridis)*, the eastern massasauga *(Sistrurus catenatus catenatus)*, and the western massasauga *(Sistrurus catenatus tergeminus)*. Massasaugas are small rattlesnakes. They are confined to the southern and eastern parts of Iowa, as are the timber rattlesnakes. Prairie rattlers are found only in extreme western Iowa. Copperheads are confined to the extreme southeastern tip of the state. Cottonmouth moccasins and coral snakes are not native to Iowa. See Figure 1 for photographs of Iowa's poisonous snakes.

All of Iowa's poisonous snakes are pit vipers. They are so named because of a characteristic pit which is located between the eye and nostril on each side of the body. Pit vipers also are identified by elliptical pupils and by two well-developed fangs which protrude from the maxillae when the snake's mouth is opened. Rattlesnakes have rattles which are attached to their tails. Harmless snakes do not have facial pits, they have round rather than elliptical pupils, and though they have teeth, they lack fangs.

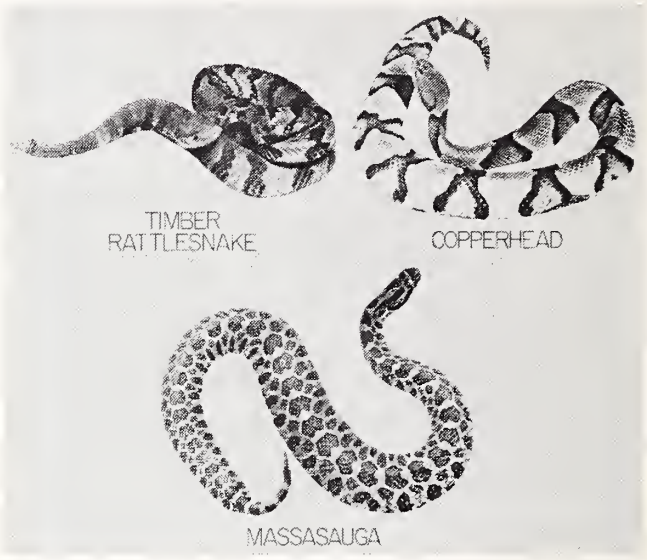

Figure 1

Oftentimes people will chop off the head of a snake which has bitten someone and bring the snake's body in for identification. Pit vipers can be identified by turning the snake's belly upwards and noting a single row of subcaudal plates just below the anal plate. Harmless snakes have a double row of subcaudal plates. Figure 2 depicts the characteristic features of pit vipers and harmless snakes.

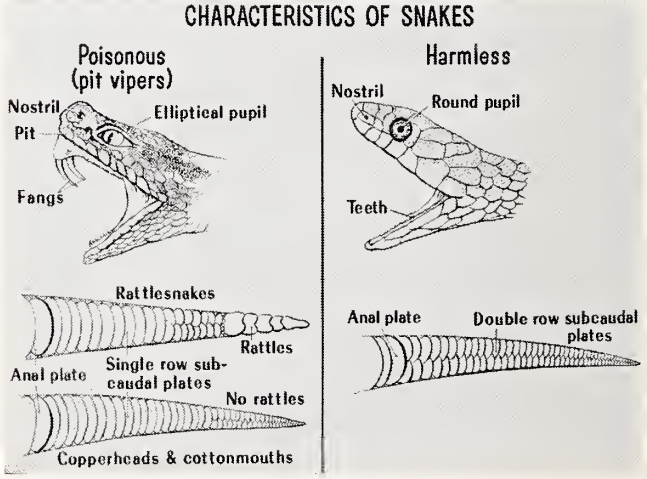

Figure 2

Dr. Parrish is a member of the staff of the Department of Community Health and Medical Practice, at the University of Missouri School of Medicine. This investigation was supported in part by Public Health Service Research Grant GM 11268-02 from the Division of General Medical Sciences, Public Health Service.

METHODS OF STUDY

A questionnaire and a letter explaining the purpose of this study were mailed to a "selected" group of Iowa hospitals listed in the "Guide Issue" of HOSPITALS (Journal of the American Hospital Association). The hospitals selected for this study were general hospitals, children's hospitals and college infirmaries. Army, Navy, Coast Guard, Public Health Service, Air Force and Veterans Administration hospitals also were sent questionnaires. Maternity, tuberculosis and mental hospitals were omitted, since they could not be expected to treat snakebite victims. A total of 110 Iowa hospitals comprised the study group. Each hospital was requested to report all in-patients admitted to the hospital for snakebite treatment during 1958 and 1959.

Most hospitals do not code and tabulate the diagnoses of emergency room and out-patient clinic visits. Since some snakebite victims are not admitted to the hospital as in-patients, it seemed essential to ask a sample of practicing physicians how many snakebite victims they treated on both an out-patient (office, home, emergency room, etc.) and on an in-patient basis. Previous surveys,[3, 4] have shown that most people with venomous snakebites are treated by general practitioners, surgeons, internists, pediatricians, and orthopedic surgeons. Therefore, from the AMA's AMERICAN MEDICAL DIRECTORY, a random sample of one-third of all the Iowa physicians in these categories of practice were sent questionnaires.

Death certificates for fatal snakebite cases were requested from the Iowa State Department of Health.

RESULTS

This report is based on questionnaires returned by 110 (100 per cent) of 110 Iowa hospitals. It is supplemented by questionnaires returned by 400 (79 per cent) of 507 practicing physicians in the state. The Iowa State Department of Health indicated that there had been no snakebite deaths during 1958 and 1959.

Incidence. Iowa hospitals reported a total of seven in-patients treated for poisonous snakebites during 1958 and 1959 (four cases in 1958 and three cases in 1959) for an average of 3.5 cases per year. *All of the analyses in this paper, excluding the estimate of incidence, were based on the seven detailed case reports received from hospitals.*

Physicians' reports, when adjusted to account for all Iowa physicians in the practice categories mentioned, indicated that approximately six in-patients and three out-patients were treated for snakebite accidents each year. Many physicians stated that they had never treated a poisonous snakebite. The difference between the estimate of six in-patients treated by physicians and the average of 3.5 in-patients reported by hospitals can be explained, in part, by the following facts: (1) Two counties from which physicians reported snakebites did not have hospitals listed in the HOSPITALS Guide Issue (2) There was evidence of underreporting of snakebite in-patients from one hospital which participated in the study. Taking all of these various reports into consideration, I estimate that approximately nine people (six in-patients and three out-patients) are treated annually for poisonous snakebites in Iowa. This provides an incidence of 0.33 bites per 100,000 population per year.

Geopathology. The geographical distribution of snakebites reported in Iowa during 1958 and 1959 may be seen in Figure 3. The lightly shaded counties are those from which hospitals reported in-patients treated for snakebites. An appropriate symbol is used to mark each hospitalized patient who was bitten by a specific kind of snake. The darker shaded counties are those from which physicians reported snakebite cases, but from which no cases were reported by hospitals.

Of seven hospitalized patients for whom detailed records were available, four (57 per cent) had been bitten by rattlesnakes, one (14 per cent) by a copperhead, and two (29 per cent) by unidentified poisonous snakes. Most likely the bites attributed to unidentified poisonous snakes actually had been inflicted by rattlesnakes.

Figure 3 shows that all of the snakebites occurred in southern and eastern Iowa. The geographical patterns of bites by various kinds of poisonous snakes in Figure 3 are consistent with the ecological ranges of poisonous snakes in Iowa described by Conant.[2]

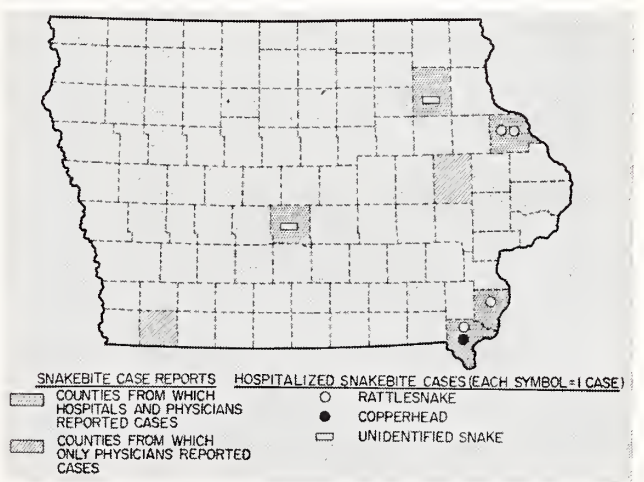

Figure 3

Temporal Relationships. Snakebites were infrequent during the colder months of the year—September through April. In general, snakes are usually inactive and/or hibernating during the colder months. Of the seven snakebites, two happened in May, two in June, one in July, and two in August. This striking seasonal distribution of bites coincides with the time that snakes are most abundant and active, and with the time when people have greater exposure due to out-of-doors

occupations and recreation. Similar "seasonal epidemics" of venomous snakebites have been observed in New England and North Carolina.[3, 4]

The time of day when most snakebite accidents occurred was the three hour period from 3:00-5:59 p.m. when three people were bitten. The number of bites by three hour periods of time were: 9:00-11:59 a.m., one bite; 12:00 noon-2:59 p.m., two bites; 3:00-5:59 p.m., three bites; and 6:00-8:59 p.m., one bite. There were no bites from 9:00 p.m.-8:59 a.m.

Bite Victims. There were four white males, three white females, no non-white males and no non-white females admitted to Iowa hospitals for snakebite treatment during 1958 and 1959.

The age distribution of Iowa bite victims was as follows: 0-9 years of age (1 bite); 10-19 years (3 bites); 20-29 years (1 bite); 30-39 years (1 bite) and 60-69 years (1 bite). Fifty-seven per cent of all snakebites were inflicted on children and young adults less than 20 years of age.

An analysis of the occupations of the patients showed that three were children, and one each was a housewife, a craftsman, a farm laborer, and a laborer other than a farm laborer.

The bites occurred while people were engaged in various activities. One person each was bitten while handling a poisonous snake, while working in the yard, while swimming, while working on a farm, while walking through a field and while engaged in road construction work. The activity was not stated for one patient.

The place where the bite accident happened is closely related to the victim's activity when bitten. Two people were bitten near a lake, river or other body of water, and one each was bitten in the yard at home, on a farm not near the house, in a field near the house, and on or near a highway. The place where the bite took place was not stated for the remaining patient.

Site and Severity. All of the snakebites were inflicted on the extremities—two (29 per cent) on the upper extremities and five (71 per cent) on the lower extremities. All bites on the upper extremities were on the fingers, whereas all bites on the lower extremities were on the lower legs including the ankles.

A modification of the clinical classification of pit viper venenation by Wood, Hoback and Green[5] was used to determine the severity of bites. Bites were classified as follows:

Grade 0—*No venenation.* Fang or tooth marks, minimal pain, less than 1 inch of surrounding edema and erythema. No systemic involvement.

Grade I—*Minimal venenation.* Fang or tooth marks, severe pain, 1-5 inches of surrounding edema and erythema in first 12 hours after bite. No systemic involvement usually present.

Grade II—*Moderate venenation.* Fang or tooth marks, severe pain, 6-12 inches of surrounding edema and erythema in first 12 hours after bite. Systemic involvement may be present —nausea, vomiting, giddiness, shock or neurotoxic symptoms.

Grade III—*Severe venenation.* Fang or tooth marks, severe pain, more than 12 inches of surrounding edema and erythema in first 12 hours after bite. Systemic involvement usually present as in Grade II.

The severity of venenation (venom poisoning) was classified as follows for seven hospitalized cases: two (29 per cent) were Grade 0; three (43 per cent) were Grade I; one (14 per cent) was Grade II; and one (14 per cent) was Grade III. There were no fatalities among the seven hospitalized cases in this series. Moreover, there were no fatalities among the estimated nine poisonous snakebites that occurred annually during 1958 and 1959 in Iowa. The case-fatality rate for snakebites in Iowa is estimated to be less than one-half of one per cent. This is confirmed by the fact that there were no snakebite deaths in Iowa during the ten year period, 1950 through 1959.[6]

TREATMENT

The current treatment of North American pit viper (rattlesnake, cottonmouth moccasin and copperhead) bites includes both minor surgery and medical forms of treatment. A constricting band (tourniquet) should be applied lightly to the involved extremity several inches proximal to the bite. The constricting band should be applied only tight enough to occlude the superficial venous and lymphatic flow. *It should not occlude the arterial circulation* and it should be released every 10-15 minutes for a minute or two. As edema resulting from venom poisoning spreads, the constricting band should be advanced to keep just ahead of the swelling. The purpose of the constricting band is to impede the spread of venom until incision and suction can be used to remove the venom mechanically and/or until antivenin can be administered to neutralize the venom.

Incision and suction (I.S.) is effective in removing venom from experimental animals up to about 120 minutes after the venom was injected. The sooner it is used, the larger the amount of venom that can be removed. Suction should be used for about one hour. We have found the suction cups supplied in the Cutter and the Becton-Dickinson snakebite first-aid kits effective for removing pit-viper venom. Incisions one-quarter inch long and one-eighth to one-quarter inch deep are made into the subcutaneous tissues over the fang punctures. A few (3-5) additional incisions may be made in the surrounding edematous tissues. A large number of incisions are not needed. Immobilization aids in limiting the spread of venom. However, if one must decide between immobilization or seeking prompt medical treatment, the latter should be chosen.

The "3 A's" (antivenin, antibiotics, and tetanus antitoxin and/or toxoid) are recommended, in addition to I.S., in treating all serious pit viper bites. Antivenin Crotalidae Polyvalent (Wyeth) is ef-

fective in neutralizing the venoms of all North American pit vipers. It is not protective against coral-snake venom. Since antivenin is manufactured from horse serum, the patient should receive a skin test before antivenin is given. For Grade I venenations, antivenin may be administered in the deltoid or gluteus muscles. In Grade II and Grade III venenations, antivenin diluted in 1000cc. of normal saline may be given intravenously.[7] Studies with radioisotopes have shown that antivenin accumulates at the site of the bite more rapidly after intravenous administration than after intramuscular administration.[8] Injection of antivenin into the local bite area is not a particularly effective way to administer antivenin. We have found the following amounts of antivenin useful in treating the various Grades of venenation: Grade 0 (no venenation) requires no antivenin; Grade I (minimal venenation) may require 10cc. (one ampule) of antivenin; Grade II (moderate venenation) requires 30-40cc. of antivenin; and Grade III (severe venenation) requires 50cc. or more of antivenin.

Since snakes' mouths and venoms may harbor pathogenic organisms, antibiotics and tetanus antitoxin and/or toxoid should be given prophylactically. Gram-negative organisms predominate; hence a broad-spectrum antibiotic is indicated. Penicillin used by itself is not adequate treatment.

Cortisone and ACTH do not affect the survival rate of animals poisoned with pit viper venom. They probably should not be used during the first few days after venenation, although they may be beneficial later in treating serum sickness resulting from antivenin therapy. Antihistamines are contraindicated, for they shorten the survival time of animals poisoned with pit viper venoms. Shock resulting from venom poisoning should be treated with infusions of blood, plasma, saline solution and vasopressor drugs. Meperidine hydrochloride and other analgesics may be given to relieve pain. Recently there have been reports of excessive tissue necrosis and amputations associated with cold therapy such as packing an extremity in ice or using ethyl chloride.[8] In our opinion, cold therapy should not be used in treating pit-viper bites.

SUMMARY

Poisonous snakebites are not common in Iowa. An estimated nine people are bitten annually, for an incidence of 0.33 bites per 100,000 people. The case-fatality rate is estimated to be less than one-half of one per cent.

All of the reported bites occurred in southern and eastern Iowa from May through August. Of seven bites reported in detail, four (57 per cent) were inflicted by rattlesnakes, one (14 per cent) by a copperhead and two (29 per cent) by unidentified poisonous snakes. All of the bites were on the extremities.

The treatment recommended included incision and suction (I.S.) and "the 3 A's" (antivenin, antibiotics and antitetanus prophylaxis).

ACKNOWLEDGMENT

The author cites with gratitude the technical assistance of the following persons: Judi Pummill, Genevieve Calescibetta, and Linda Hinson.

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Booklet Describes Efficiency of State Laboratory

Administrative procedures which have resulted in savings of $15,000 annually are described in a new booklet about the State Hygienic Laboratory at the University of Iowa. Savings have resulted from a 45 per cent cut in the number of administrative clerical personnel through the introduction of machines to replace manual procedures, and through streamlining clerical operations. Personnel left as a result of normal attrition, and were not replaced.

The 56-page booklet describing office staffing patterns and trends as well as many other phases of the operation of the Laboratory has been published by the USPHS Communicable Disease Center, and is now being distributed to laboratory directors throughout the nation. It was designed to provide an example of administrative efficiency.

Authors of the booklet are William J. Hausler, Ph.D., director of the Laboratory, Mr. Jesse C. Norman, chief of the Communicable Disease Center's management-consultation unit, and Mr. Bradford P. Smith, a CDC laboratory-management consultant.

"The development and installation of the Iowa system (in 1959-1960) has afforded substantial savings in operating costs while providing more rapid and efficient service to the medical community," the booklet notes. Over a four-year period, the clerical staff in the administrative office was reduced from 11 to 6 persons by using machines wherever feasible for such tasks as duplicating, folding, stuffing, sealing and posting, and through the adoption of good forms design, uncomplicated procedures and simple internal controls.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 448

CLINICAL SUMMARY

A THREE-WEEK-OLD MALE INFANT was admitted to the University Hospitals because of respiratory distress since birth. He had been the product of an uncomplicated pregnancy and delivery, and his birth weight had been 6 lbs. At the time of birth, the infant had been "sleepy" and had had severe inspiratory stridor. The stridor had become less severe during the first 10 days of life, but then had remained essentially unchanged until the time of admission.

The stridor was always predominantly inspiratory. It was constant, somewhat less apparent during sleep and somewhat worse during periods of excitement. No cyanosis and no profound dyspnea had been observed, but occasionally the baby seemed to "catch his breath." There had been no dysphagia, coughing or expectoration of blood or sputum.

A 13-month-old brother was considered healthy. The infant's father had hay fever and the mother bronchial asthma, but they were otherwise in good health.

Physical examination at the time of admission to the hospital revealed a white male baby in mild respiratory distress. He had both inspiratory and expiratory stridor, with a prolonged expiratory phase. His weight was 6 lbs. 11 oz., and his length was 21 in. His rectal temperature was 99° F., his pulse rate 140/min., and his respiratory rate 30/min. The skull, eyes, ears, nose and throat were all normal. The neck was supple, and no abnormal cervical masses were palpable. There was no significant adenopathy. The thoracic cage was normal in contour, and all lung fields revealed normal breath sounds and were normally resonant, despite the prolonged expiratory phase of the respiratory cycle. Cardiovascular examination also revealed normal findings, as did the remainder of the general examination.

The hemoglobin concentration was 13.7 Gm. per cent, and the hematocrit was 42 per cent. The total white blood cell count was 8,250/cu. mm., and the differential count included 30 per cent mature neutrophils, 1 per cent eosinophils, 59 per cent lymphocytes, and 10 per cent monocytes. Routine urinalysis revealed normal findings. The interpretation of the chest x-rays was as follows: "AP and lateral views of the chest reveal no impingement upon the trachea. The mediastinal structures are in the midline. There is hyperaeration. The lungs are free of infiltrates. The heart, as visualized, is normal. The anterior mediastinum is full, presumably due to the thymus. Impression: Hyperaeration. Otherwise, negative chest." On the second hospital day, additional roentgenograms of the chest, to be taken during expiration, were requested and taken. The radiologist reported: "PA and lateral views of the chest in expiration show the trachea and mediastinal structures to be nondisplaced. The heart and great vessels are within normal limits. The leaves of the diaphragm and costophrenic angles are clear. The lung fields are clear. I do not identify lobar emphysema on this film. Impression: Negative chest."

After that second pair of roentgenograms had been obtained, direct laryngoscopy was done. The epiglottis was visualized and was normal. The epiglottis was tipped anteriorly, and the vocal cords were visualized and appeared normal. It was noted that the same stridorous sounds were audible even when the epiglottis was widely tipped forward from the vocal cords, and the cords were in direct view and open.

Bronchoscopy was then recommended, and it was done on the third hospital day. The bronchoscopist noted that the tracheal mucosa was somewhat erythematous, and that the trachea seemed to collapse during deep inspiration. The bronchoscope was passed downward until the carina was visualized. It appeared somewhat blunted, but no obstructive lesions were visible. The bronchoscope could not be passed beyond the carina, and was then withdrawn slowly. The tendency of the trachea to collapse during inspiration was again noted.

Immediately after withdrawal of the bronchoscope the patient had some difficulty with respiratory obstruction during inspiration. He was given oxygen by mask, and his breathing became easier. He was then housed in a croupette providing high humidity and additional oxygen, and was given 50 mg. hydrocortisone acetate (Solu-Cortef) intra-

muscularly. Despite these measures, he continued to have significant inspiratory stridor. For the first time he also became cyanotic during feedings, and developed marked intercostal and subcostal inspiratory retractions. A second intramuscular dose of 50 mg. of Solu-Cortef was given on the day after bronchoscopy, but his respiratory function did not improve. Two days after bronchoscopy, the infant was found to be apneic, cyanotic, and pulseless. Resuscitative measures, including trachael intubation for administration of oxygen and external cardiac massage, failed to revive him.

CLINICAL DISCUSSION

Dr. F. W. Stamler, Pathology: The CPC case for today will be opened for discussion by Dr. Brian McCabe, professor and head of otolaryngology. He will consider it as an unknown, relating to the problem of respiratory difficulty in the newborn.

Dr. B. F. McCabe, Otolaryngology: It certainly was an unknown to me, and after reading the protocol several times, I still regard it as an unknown. I don't know what killed this baby.

I presume that my task should center around a consideration of the causes of respiratory obstruction in general. We shall then discuss what clues we have as to the cause of this child's disease, and then set about to discover the cause.

It is generally helpful to arrange specific conditions around a framework, and I should like to do that here. There are a number of categories of respiratory obstruction, but let us confine our discussion to respiratory obstruction in the newborn. This is one of the red-hot emergencies the physcian must do something about immediately, and he must have a good background concerning what can go wrong with a respiratory tract, so that he doesn't have to stop to plan his steps.

There are four or five groups of respiratory obstructions. The first of these that we might consider is the bronchiolar and secretional. This, the commonest cause of obstruction in the newborn, results from amniotic-fluid accumulation in the hypopharynx and trachea, and also from mucus accumulations there. Since this problem belongs more to the obstetrician and the pediatrician than to the otolaryngologist, I shan't dwell on it at any great length.

The second big group to be considered is glottic obstructions. The glottis is a relatively common place for respiratory obstruction to occur, but it is more frequent in the older child or adult than in the newborn. A common cause is web-formation. A web in the larynx is nothing more than an incomplete splitting, so that there is fusion of the two cords, particularly anteriorly, to the degree that instead of the typical appearance, there may be only a hole posteriorly between the arytenoids. A congenital polyp may occur there, although such lesions usually are acquired. Congenital cysts of the larynx may obstruct the airway.

Under this group of glottic causes I should mention a common condition, congenital laryngeal stridor. There is some confusion about nomenclature here. By congenital laryngeal stridor, I refer to the benign condition that is manifested by inspiratory stridor while the child is breathing heavily or crying, but almost disappears when the child is at respiratory rest. The child grows out of it within about 12 to 24 months. Congenital laryngeal stridor is due to a soft, short, floppy epiglottis which does not support the aryepiglottic folds. The aryepiglottic folds are so poorly supported that they are drawn into the larynx on sharp inspiration, producing a quite characteristic stridor with tonal quality to it. Congenital laryngeal stridor is a benign condition and is distinctly different from laryngomalacia. Laryngomalacia results in an inability of the thyroid cartilages to support themselves when subjected to a negative pressure at inspiration. The whole larynx, including the cricoid, collapses. This presumably is due to a developmental defect in the supporting structure of the larynx. The cartilage is incompetent and will not support a normal degree of negative pressure. It has a counterpart in tracheomalacia, farther down the respiratory tract.

The third group includes tracheal and bronchial causes of obstruction. Here, one of the most common causes is a tracheoesophageal fistula (TEF). TEF carries with it manifestations that make its recognition fairly easy—a large air bubble in the stomach, escape of ingested milk into the trachea, and expectoration of the milk. A vascular ring, a rarer cause, can sometimes be very difficult. Vascular ring is an aortic-arch anomaly, consisting of vessels which should disappear late during the developmental stage. The trachea is compressed fore and aft. It causes obstruction and a failure of full lumen development, so that the endoscopic picture is one of narrowing of all diameters. I've seen only two cases endoscopically, and both had this configuration. Finally, varying degrees of agensis of the bronchial tree are possible.

Other less common causes of respiratory obstruction in the newborn constitute such a particular problem that they should be dealt with somewhere, and this seems the place to discuss them. Choanal atresia is a great problem in the newborn because a newborn child will not breathe through his mouth. He can be made to breathe through his mouth only with great difficulty, and will do so only beyond the age of about two weeks. As a matter of fact, if a newborn infant's nose is held shut, he may suffocate rather than open his mouth to breathe. If he becomes sufficiently annoyed, he will open his mouth to cry and thus will breathe, but as soon as he stops crying and closes his mouth, suffocation will recur. By choanal atresia I mean atresia of the posterior nares, where the nose meets the nasopharynx. It is a genuine respiratory emergency, and there are ways of

handling it. For instance, one can put in an oral airway, but this makes the child cough, gag and vomit, and it is not a permanent solution. Making the child cry all the time is not a good solution, either. It may be necessary to perforate the choanal plate by means of a blunt instrument. It will stay open until the child gets old enough to learn how to breathe through his mouth.

Finally, we should consider another group of causes, the cranio-facial anomalies, especially the Treacher-Collins syndrome and the Pierre-Robins syndrome. The obstruction in these conditions is caused by hypognathia and glossoptosis. Actually, the tongue is really not glossoptosed; there is a normal amount of tongue but too little jaw to surround it, so that the tongue is pushed back in the throat. Such a child commonly requires a tracheotomy shortly after birth. A better way of handling the situation is by a temporary anterior tongue-tie—tacking the tongue to the lower lip and releasing it after six months. The syndromes are instantly recognizable as such, even in the newborn. An infant with this anomaly has an abnormally small jaw, so that the chin is practically indefinable.

Now, having our framework, let's consider this child. The airway obstruction was present at birth, and hence his condition was a congenital rather than an acquired one. Thus we have eliminated a number of things, including infection and trauma. The child, I believe, had a pretty good cry, with a good tonal quality. Hence the vocal cords must have been well developed. Since a web or an agenesis of a part of the larynx is incompatible with a good clear cry, the obstruction was probably non-glottic. The child had stridor all of the time—worse during respiratory effort, but present all the time. Thus congenital laryngeal stridor probably was not the cause.

At this point, one must proceed to tests. If the obstruction is compatible with several hours of life, the next thing to do is to get a chest x-ray to make sure the stomach is not in the chest, and to identify the air column representing the trachea and the air column representing the bronchi. This child's x-rays were reportedly normal. Thus a number of things are ruled out. The stomach was in the abdominal cavity, it had a normal amount of air in it, and during the initial days of life the child nourished satisfactorily and did not cough up the milk he drank. Thus we can eliminate a TEF. Serial x-rays—at least two sets—failed to demonstrate anything to suggest agenesis of lung segments.

Right after the x-rays are interpreted, one should obtain a barium swallow. A vascular ring, as a rule, will cause deviation of the barium column around it. If there is a knot in the barium column at the level where one might expect to see a vascular ring, then the diagnosis has been confirmed, and immediate corrective surgery is called for.

We have gone about as far as we can with the initial studies. The next thing to do, if we haven't yet found the cause, is to take a look. The first step is direct laryngoscopy. In a child under one year of age one can quite easily see the larynx and the immediate subglottic area without anesthesia, in almost any instance. It is easy to do. It can be done with an open-blade (anesthesiologist's type) laryngoscope. But it can be done more easily with a regular (Jackson or Holinger) laryngoscope, which is tubular in shape. One needn't lift up the epiglottis in order to see the larynx in an infant. With the child mummied securely and the head held by an assistant, he merely inserts the laryngoscope over the base of the tongue, lifts up the base of the tongue, and waits until the child stops swallowing and coughing. The child will relax after 10 to 15 seconds. Lifting the tongue will lift the epiglottis as well, and the larynx can be seen quite satisfactorily. That was done in this child, and no abnormality was seen. Glottic conditions and immediate subglottic ones—cricostenosis, webs, polyps, and paralyses—were thus ruled out.

Bilateral vocal-cord paralysis occurs in the newborn. It usually occurs as a manifestation of central-nervous-system disease.

There isn't much left to do now other than tracheobronchoscopy. At this moment it is more acceptable than thoracotomy, yet it is not without danger. The smaller the airway, the more dangerous it is to pass a tube, as was evident in this child, but if one does it judiciously he can get away with it quite nicely. One good technic is to anesthetize the child with a short-acting agent—one that metabolizes quickly—pass the 'scope, take a good quick look, and get out again. The 'scope should be passed down *to* the point of obstruction, but not *through* it. The narrower the airway, the more dangerous this is, for just touching respiratory mucosa where there has been a pathologic change will cause edema and a consequent loss of some of the existing airway. The danger time is about four to six hours postoperatively.

Superb nursing care is an absolute essential. The nurse has to be alert enough to call the physician before real trouble has occurred.

The time to do the tracheotomy is when you're thinking about it, not when it is an emergency.

Bronchoscopy was done, and the protocol describes A-P diameter approximation. In other words, the anterior and posterior walls almost touched. No intraluminal abnormality was identified. The trachea was examined, and the main-stem bronchi were examined. Because these areas almost touched and it was impossible to see beyond them, the 'scope had to be advanced in an attempt to see whether there was a reason for compression further on down. I suspect that this bit of endoscopy resulted in mucosal edema. Negative pressure

and edema caused by negative pressure constitute a vicious cycle. The more the child tries to breathe, the more edema is caused. This is a possible explanation for the late (48-hour) demise. I think we have every reason to believe it was caused by asphyxiation, and that the bronchoscopy was greatly instrumental in it. Whether the child otherwise had a chance to live, in this situation, we don't know.

As for my diagnosis, it is going to have to be a guess. I have a choice between two conditions: external compression by a mediastinal mass or cyst, or a vascular ring. The normal chest x-ray contraindicates external compression. A mass of sufficient size to depress the trachea ought to be visible by x-ray. Against a vascular ring, is the bronchoscopic configuration that was seen. A barium swallow was not done, though I think it would have been very helpful in diagnosis. On the basis of the normal chest x-rays, I favor the diagnosis of a vascular ring.

Dr. Stamler: Thank you, Dr. McCabe. Does anyone have any questions? If not, we shall have a discussion of the radiologic findings.

Dr. S. H. Cornell, Radiology: The first frontal roentgenogram of the chest, obtained on Ocotber 17, showed that the diaphragm was low on both sides. There was generalized overexpansion of the lungs. There were no localized areas of overexpansion. The heart was normal in configuration, as was the mediastinum. The lateral view taken at the same time showed some fullness in the anterior mediastinum which was interpreted as due to the thymus. There was nothing very striking about the tracheal air shadow. Again, the leaves of the diaphragm were quite low, indicating generalized overaeration.

Two days later a frontal roentgenogram during expiration, taken at the request of the referring physician, showed that the lungs were aerated about evenly. There were no areas suggestive of lobar emphysema, or localized emphysema. The mediastinum looked wider because that was an expiratory film, and the cardiac shadow was also wider. The lateral view obtained at that time demonstrated a slight forward bowing of the trachea. However in a film taken during expiration it is very common for the trachea to buckle slightly, and it would be very difficult to make anything out of that finding.

I agree with Dr. McCabe that a barium swallow would have been very helpful in this case.

Dr. Stamler: Does anyone have any questions or comments concerning the radiologic findings?

Dr. P. Vlad, Pediatrics: I wonder whether one shouldn't be suspicious of the fact that the mediastinum appears to be wider on the right than on the left in both of these x-rays. If there were a thymic shadow, perhaps one might be able to identify it in the lateral view. I am not suggesting that this is in any way a pathognomonic appearance of right aortic arch, but it certainly is a common occurrence with that anomaly.

Dr. Henry E. Hamilton, Internal Medicine: Could Dr. McCabe tell us whether there was any significance in the observed collapse of the trachea upon withdrawal of the 'scope? Should one expect this to happen in an infant of this patient's age?

Dr. McCabe: The trachea does collapse somewhat during inspiration, as can readily be seen in all of our routine bronchoscopies. The anterior and posterior walls come slightly together, in part by virtue of the membranous posterior wall. It sucks up toward the anterior wall, but there is never any contact between the anterior and posterior walls. Here we have described actual contact of the two walls, either because of a poor-quality trachea—tracheomalacia—it just couldn't support itself—or because of external compression, whether as a result of congenital anomaly or of a mediastinal mass. This is the crux of our problem in differential diagnosis.

Dr. Stamler: Are there any other questions?

The findings at autopsy can be quite briefly presented. The child did have an anomalous development of the aortic arch, with a vascular-ring malformation encircling and compressing the trachea and esophagus. It was the more common type of malformation, one in which there is a complete double aortic arch. The left arch passed anteriorly to the trachea and esophagus, as the aorta normally does, but the right arch passed posteriorly. Beyond that point, the two joined to form the normal descending aorta. At the time of death there was mild pneumonitis and some patchy collapse of pulmonary parenchyma, and at the time of autopsy the examiner felt that the trachea in the area of the aortic ring was edematous as well as distorted and compressed.

Although the infant had a history of respiratory distress for nearly a month, there were no findings in other organs, such as the brain, to indicate a serious and long-standing oxygen want. Thus, presumably, correction of the defect might well have led to normal development.

The first photograph shows a series of cross-sections of the airway, beginning at the region of the larynx and progressing downward. Here in the lower portion you see an indication of the compression and perhaps underdevelopment of the trachea that was noted on bronchoscopy. As seen here, there was very little lumen at this level, which was the region of the vascular ring. Also, the anterior kinking or tenting of the trachea at this point was rather pronounced at the time of autopsy. The next slide shows a section of the trachea from this region. It doesn't show anything very dramatic, but there are a few things to point out. One is that the normal ciliated epithelium of the trachea had been replaced by an early process of squamous metaplasia. All of the cilia have been lost, and although it isn't very well shown, there is

some inflammatory infiltrate in the submucosa and extending even into the epithelial layer. There are a number of neutrophilic leukocytes through here, and although the appearance of edema in soft tissue such as this is rather difficult to portray in a microscopic section, certainly there is a cleavage of the tissue consistent with a considerable degree of edema. Also, the submucous glands show abundant mucus-producing activity, which may also have had something to do with the blockage of the airway in this child. There was a considerable amount of mucus present.

The next slide is a section from the upper portion of the trachea showing normal ciliated mucosa and somewhat more dense-appearing submucosa, with perhaps less indication of mucus secretion here. But particularly noticeable is the difference in the histology of the epithelial lining.

This slide is a fairly representative section of lung. There is some lobular collapse, and perhaps some of these spaces are overexpanded. One can see a very mild pneumonitis, a little bit of exudate in the alveoli, and also some interstitial pneumonitis, although not very extensive or severe.

I want to show a few diagrams illustrating the embryology of the aortic-arch region. Here are the components of the embryonic aortic arches which enter into the definitive adult components—the aorta and its major branches—in this region. There are a total of six pairs of aortic arches, of which the first two appear very early and disappear completely at a very early age. The third, fourth, and sixth are those which contribute principally to the adult vessels. The fifth also is very transitory, and disappears completely. In the normal course of events, the important part of this diagram is this portion of the right dorsal aortic root—the eighth segment, which normally regresses and disappears. The remainder of the right dorsal root enters into the formation chiefly of the right subclavian and internal mammary vessels, but in the present instance this segment has persisted and has led to the formation of the double aortic arch. This slide shows the components which go into the normal aortic arch and associated vessels, and here is the eighth segment of the right dorsal aortic root, which normally regresses and disappears. Notice that the remainder of it shifts cephalad, becomes the left subclavian, and also enters into the formation of the innominate and right subclavian arteries.

Now here is the situation that we had in this case: the persistence of both the left and right aortic arches, the right common carotid and subclavian vessels arising from the right side and the comparable left-sided vessels on this side, and the two arches joining to form a common descending aorta. Here is the position of the vascular ring in relation to the trachea and esophagus. This is the configuration that was found in this case.

As for the cause of death in this infant, I don't have much to add to Dr. McCabe's remarks. Here is essentially the way in which the terminal course was hypothesized—increasing difficulty as a result of edema and perhaps some increased secretion. There was no other exact mechanism to which we could attribute death in this case.

Dr. Hamilton: If the child were operated upon, and if the vascular anomaly were corrected, was there enough residual airway to permit his survival? The specimen of the trachea, shown earlier, suggested a great deal of atrophy, a narrowing of the lumen, and a great reduction of the internal circumference.

Dr. Stamler: This is a problem that I also wondered about. I think it quite possible that the child's difficulties would not have been completely solved by the opening of that compressing ring. I know that in some of the reported cases patients have continued to experience difficulty, and have succumbed after surgery. I should like Dr. Ehrenhaft to discuss this problem from the standpoint of correction.

Dr. J. L. Ehrenhaft, Surgery: This is sometimes a tricky diagnosis to make. It is really unfortunate that it was not made in this child, and in general I should like to point out that it can frequently be missed in children with respiratory difficulties, unless the possibility is kept constantly in mind.

The diagnosis of tracheoesophageal rings or other vascular anomalies constricting the mediastinal structures of one type or another can be made by esophagrams and other radiologic studies, and in some instances by angiography. The latter procedure elucidates the anatomic variation present, and thus may be helpful to the surgeon. There are additional types of compression of the trachea and esophagus in anterior and posterior directions. There may be a simple right-sided aortic arch lying to the right of the mediastinal structures, and compressing the trachea and esophagus between it and the ligamentum arteriosum. The ligamentum arteriosum is the structure which will need releasing to free the tight, circular constriction of the structures lying between the pulmonary artery and the ascending and transverse arch of the aorta. One may have anomalous innominate arteries, or one may have anomalous carotid arteries. Constriction may be due to a true double aortic arch, as was the case in this patient.

There is still another anomaly that has not been mentioned, the so-called dysphagia lusoria or aberrent right subclavian artery. The right subclavian artery arises as the last vessel of the arch system just distal to the takeoff of the left subclavian artery, it travels around and behind the trachea and esophagus, and it compresses the structures in this manner. Usually the symptoms are less severe in this type, but whatever the cause of constriction, surgical relief must be given to those children.

It has been mentioned that some patients fail to do well for some time after relief of this compression. The factors include changes in the structures of chronically-compressed tracheal rings

which may be small and inadequately developed. Chronic compression also causes super-added pulmonary infection due to retained secretions, and many of the children have chronic bronchitis or bronchial infections that are difficult to treat in the immediate postoperative period.

I should like to make another point. Dr. McCabe has mentioned that an enlarged thymus does not produce symptoms. I disagree with him. I think that symptomatic thymic enlargement *does* exist, though it is rare. We have seen children with compression of the trachea and esophagus by the thymic gland's encompassing and encircling those structures. We have seen thymus glands so large as to fill the entire right chest cavity and to cause severe symptoms.

Dr. Stamler: You feel, then, that surgical correction of this ring would have given an adequate airway in this case?

Dr. Ehrenhaft: The sections which you have shown here are fixed tissue sections. That fact may account for the apparent collapse of the tracheal rings.

Dr. Stamler: That's true, and histologically the tracheal rings in that area appear to have been normally developed, although somewhat small.

Dr. Vlad, would you say something about this problem from the standpoint of management of this patient?

Dr. Vlad: Well, since it is a pediatric case, I suppose we have to assume responsibility. The lesson is quite obvious. In any newborn baby with symptoms of respiratory obstruction, the conditions to be ruled out are those which can be managed surgically. If the x-rays have been normal, obstructive vascular rings must be excluded by appropriate methods. In this case we erred in assuming that bronchoscopy was an appropriate method for diagnosing or excluding this anomaly. It is not. Several times Dr. McCabe expressed his regret that no barium swallows were available. The implication was quite clear all along: Barium swallow is a far better method of diagnosis than bronchoscopy in this respect. Over a period of years we have seen a number of babies about whom the same assumption was made, with similar results.

Also I think that we should not blame the radiologist for a failure of recognition. This is not a diagnosis which can be made on a plain x-ray of the chest. However, when a baby exhibits signs of respiratory obstruction, one should cling to the slightest possible clue. The wide right mediastinum here might have been enough to direct attention to a right aortic arch—and consequently to a vascular ring—and therefore to dictate a request for a barium swallow. The deviation of the trachea on the lateral view is less convincing, but it too should have been regarded as a suspicious finding and should have led to a barium swallow.

The problem of surgery is never simple, but successful surgical corrections have been recorded in patients as young as three days of age.

The problem of postoperative care is very serious and presents many difficulties. By and large, these babies tend to be sicker following surgery than prior to surgery. My guess is that the intubation and the edema that results from it have a lot to do with this. I have personally seen a baby who could not be extubated for eight months following surgery. The trachea is not made of rubber, and therefore it will not spring back, once the constrictive ring is broken. The restoration of normal calibre takes time. It is the normal process of growth and development which reestablishes the normal diameter of the trachea.

Dr. Stamler: Thank you, Dr. Vlad.

Dr. Ehrenhaft, can you show us what a barium swallow looks like?

Dr. Ehrenhaft: I brought a few slides. Everybody has talked about a diagnostic barium swallow, but we haven't seen one as yet. The first slide is the esophagram of an adult patient who had no symptoms. There is a posterior arch, a right-sided arch, and this patient was fortunate enough not to have any symptoms even though his trachea and esophagus were somewhat displaced by a large, posterior, rounded defect.

I should like to point out that many people have this deformity but have no symptoms. They may develop symptoms only with advancing age. Their vessels dilate, the aortic arch dilates, and then compression of the mediastinal structures may take place. I have seen some who got into difficulty at 60 and 65 years of age.

This slide is an esophagram of a baby with the same findings. It is a very easy diagnosis to make. Nothing else produces this type of appearance.

Here is another esophagram and chest roentgenogram. This child, in addition, has obstructive pulmonary symptoms. There are an emphysematous and over-aerated lung and a depressed diaphragm, and the deformity previously mentioned is visible in the esophagram.

Dr. Stamler: Are there any instances in which angiography has helped?

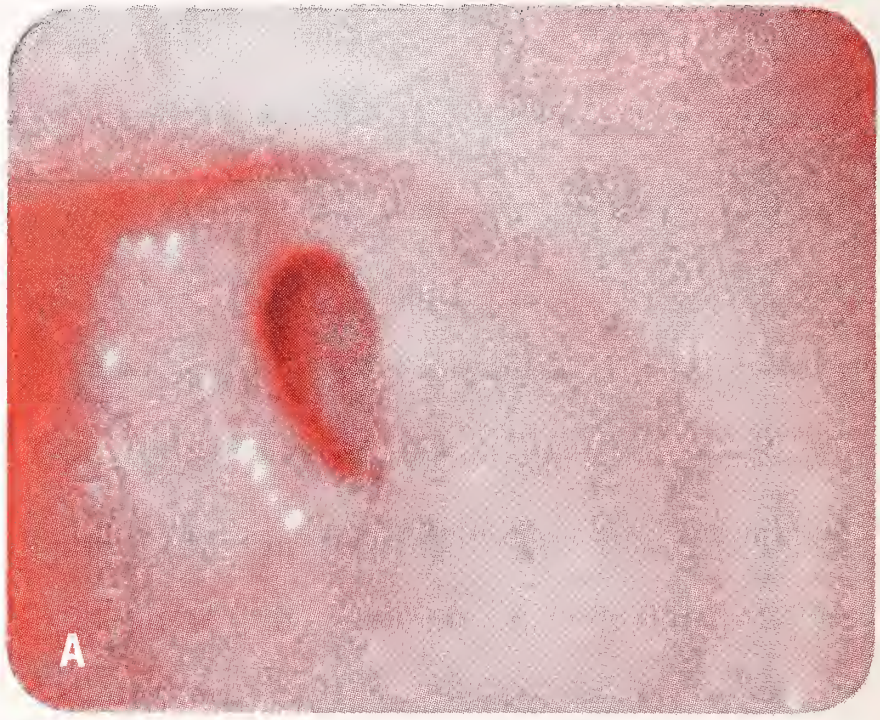
Dr. Vlad: Aortography is a diagnostic refinement that has little value in the detection of these anomalies. Diagnosis has to be made by simple means. The angiograms have value in that they clarify the anatomical type, and at the time of surgery they allow identification of the vessels which may be sacrificed.

SUMMARY OF NECROPSY FINDINGS

1. Congenital vascular-ring malformation of aorta, with aspyhxia due to tracheal compression.
2. Interstitial pneumonitis, mild, bilateral, with patchy collapse.

CLINICAL DIAGNOSIS

Vascular ring.



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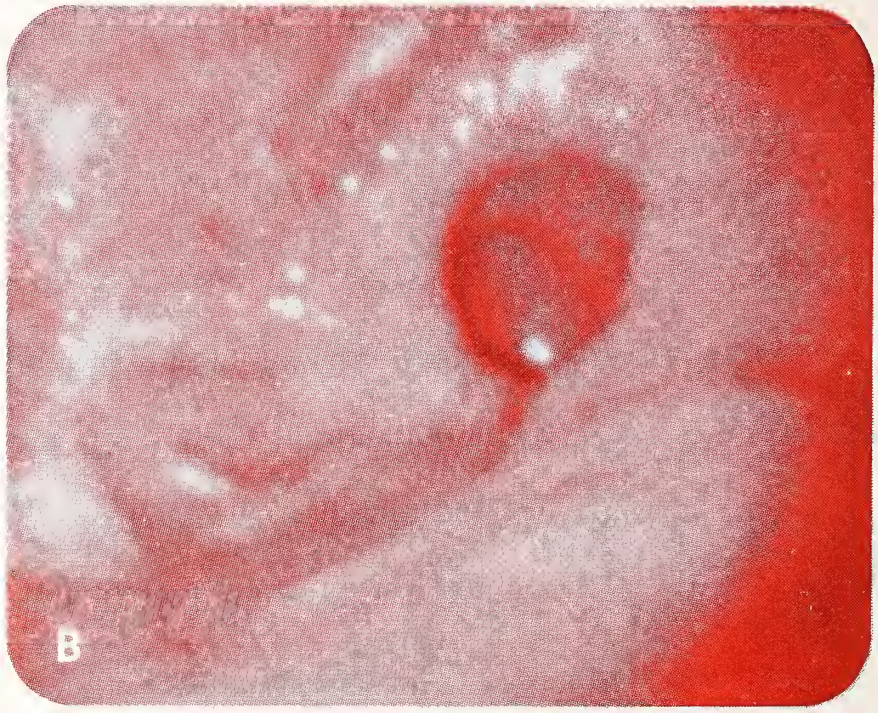

Photographs—Harry Barowsky, M.D., Lawrence Greene, M.D., and Robert Bennett, M.D., from a Scientific Exhibit presented at the Annual Meeting of the American College of Gastroenterology, Bar Harbour, Florida, Oct. 24-27, 1965.

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SEARLE

Research in the Service of Medicine

Editorials

PSYCHIATRIC ILLNESS AND THE PHYSICIAN'S WIFE

Probably there is no field of endeavor in which it is so difficult to work out a way of life that is compatible with health, success, and the welfare and happiness of one's family as in the practice of medicine. For a busy doctor this is as true in this era of rapid transportation as it was back in the "horse and buggy" days. Pertinent to the busy doctor's problems is a recent article by Evans on psychiatric illness in the physician's wife.* It is a study that should prompt any doctor of medicine to pause and reflect.

Prompted by the frequent admissions of physicians' wives to a private psychiatric hospital, Evans was led to investigate the possibility of a relationship between the husbands' occupation and the development of illness in their wives. Selected for the study were the first 50 cases admitted to the Institute of Living, Hartford, Connecticut, in the years 1960 through 1963. Criteria for inclusion in the study were (1) the record had been completed; (2) at the time of admission the patient was married to a physician; and (3) the illness clearly had not been caused by organic disease. The study was based on hospital records. Histories were obtained from 40 of the husbands by 31 different therapists who treated the patients. Copies of records from other hospitals and therapists, and reports from social workers, were parts of the case records. The results of psychologic testing were included, and information acquired during therapeutic sessions were also a part of the records.

At the time of admission to the hospital, the mean age of the 50 patients was 40 years, but the individual ages ranged from 25 to 62. The mean age at onset of illness—when symptoms first appeared—was 34 years. In 23 patients it was between 29 and 35 years of age.

When the symptoms of illness first became overt, the patients had been married an average of 13 years, though the figure varied from 1 to 18 years. Admission to the hospital occurred after an average of 19 years of marriage. This group of physicians' wives had been married at a mean age of 21 years, though the range was from 17 to 33 years of age.

The doctors were older than their wives by an average of 5.6 years, and they had been 26.7 years of age, on the average, at the time of marriage. Ten of the doctors were eight or more years older than their wives. None of the husbands had a history of serious psychiatric illness, but one had been hospitalized for drug addiction. Their wives confirmed the fact that doctors are not perfect husbands by complaining that they were undemonstrative, cold, passive, domineering, inadequate as husbands and fathers, and stern and compulsive.

The most common complaint voiced by this group of doctors' wives concerned the frequent absences of their husbands. In 16 cases this was noted by the therapist as a precipitating factor in the patient's illness. Wives who previously had worked in their husbands' offices now felt left out and excluded, since the success of their practice had warranted the employment of other nursing and office help. Most of the doctor-husbands were busy and successful when their wives' illnesses began, and their mean age at that time was 39.5 years.

The majority of the women were from middle-class families, though they had quite varied religious, ethnic and social backgrounds. There were family histories of emotional disturbance in 31 of the wives' families, and in 18 of those 31 there were histories of psychiatric illness in parents or siblings. The records indicated that many of these women had been closely attached to their fathers, and in marriage had attempted to create father-daughter relationships with their husbands. The author postulates that they may have been attracted to men in a field of endeavor which they subconsciously associated with protection, safety and understanding, thus providing themselves a resolution for their basic oedipal conflict. In general these women had been socially, intellectually and culturally well adjusted, but they were "rarely warm, demonstrative, affectionate or giving."

The most common symptoms in the group of women were depression, drug addiction and alcoholism. Almost half of the patients also had complaints of chronic or recurrent pain involving almost every bodily system. Ten of the group had undergone extensive operative procedures for the relief of pain. Repeated hospitalization had been common, and extensive workups had been done in an effort to find an organic basis for symptoms of obscure etiology. In the group of 50 patients, 29 had illnesses that were classified as non-psychotic and 21 had ones that were considered psychotic.

This study clearly indicates that despite successful adaptation early in marriage, and during the stress of their husbands' schooling and specialty training, these women later developed serious psychiatric illnesses. In many instances the outset of the illness coincided with the peak of the husband's career, when the demands of his practice deprived the wife of the support she needed in order to cope with the realities of everyday living. Symptoms of depression, of addiction and of

* Evans, J. L.: Psychiatric illness in physician's wife. AM. J. PSYCHIATRY, 122:159-163, (Aug.) 1965.

somatization appeared to be definitely related to the husband's profession. Addiction, in particular, seemed to have been occasioned by the accessibility of drugs in the husband's office or in his bag.

Though there is no question regarding the validity of the author's findings, it seems quite within the realm of probability that these same women, if they were married to successful lawyers or business executives or clergymen, would have developed similar symptoms under the stress of marriage and of community living. All too often one hears of a divorce in situations where the wife has worked through the long years while her husband earned his doctorate in education or political science or economics. When their goal and an accompanying financial security have been achieved, the young people suddenly find that they have little in common.

Any physician will acknowledge that the role of a doctor's wife is anything but a bed or roses. He will tell you that it requires stability, maturity, dedication and devotion, understanding and compassion. He will pay tribute to his wife, and will assert that whatever success he enjoys can be attributed to her efforts, as well as to his own.

ACUTE APPENDICITIS IN THE ELDERLY PATIENT

A recent report by Williams and Hale, of the Department of Surgery at the State University of New York, Buffalo, emphasizes that the classic symptoms and findings of acute appendicitis are seldom seen in elderly patients.* The symptomatology is subtler in that age group, and there are consequent delays in diagnosis and treatment. As a result of a virulent and rapid pathologic course, the inflammatory process spreads quickly and insidiously. In many instances the presence of concomitant disease and the numerous conditions that must be considered in the differential diagnosis of an acute abdomen in an aged patient create additional difficulties. An elderly patient with a lowered physiologic reserve can ill afford delays in diagnosis and treatment. This is substantiated by the much higher mortality rate in old people than in younger individuals with the same condition.

The Buffalo surgeons undertook to reevaluate the diagnoses and therapeutic results in the elderly patients with acute appendicitis who had been admitted to the Edward J. Meyer Memorial Hospital during the years 1952-1961, inclusive. They reviewed the case records of 83 consecutive patients over 60 years of age in whom the preoperative, postoperative or autopsy diagnosis of acute appendicitis had been made.

The diagnosis of appendicitis was confirmed in 65 of the 82 patients who were operated upon. One patient who had been ill for 10 days died shortly after admission to the hospital, and the diagnosis was proved at autopsy. Abdominal lesions other than acute appendicitis were found in 18 patients.

In the group of 83 patients, 43 were males and 40 females; 72 were Caucasians, 9 were Negroes and 2 were Indians. Thirty-eight patients were in their 60's; 33 were in their 70's; and 11 were in their 80's. Only 13 patients were first seen within 24 hours after the onset of symptoms, and more than half were admitted to the hospital three or more days after onset. Three patients had been ill for three weeks!

In only 25 instances was a typical history of acute appendicitis obtained; no history could be obtained for eight patients; and in the remaining 50 cases the histories were of varying dependability. All patients had pain, and the majority complained of loss of appetite. Nausea and vomiting had each occurred in slightly more than half of the patients. Constipation was present in one-fourth of the group, and one half of the patients had taken cathartics prior to admission to the hospital.

Abdominal tenderness was elicited in all of them, but it was localized in the right lower quadrant in only 71 of the 83 patients. Rebound tenderness was found in 51, and rigidity was present in only 36. Tenderness on rectal examination was found in 23 patients, and a mass was palpable in nine of the group. In nine patients there was no elevation of the white blood cell count, and in 19 there was no fever.

Both diagnosis and treatment were complicated by the fact that only 12 of the 83 patients were free of other organic pathologies. About two-thirds of the group had some form of cardiac disease; one-third had advanced disease such as pulmonary insufficiency, pneumonia, congestive failure or uncontrolled diabetes.

Operations were performed within 12 hours of admission on 65 of the 83 patients. In 10 cases operative intervention was delayed for intensive preoperative treatment of an associated disease. Operation was deferred in four patients because of a delay in diagnosis.

In relating the operative findings to the duration of symptoms, the investigators found it apparent that the disease process progresses rapidly in such patients. Of 26 elderly people with symptoms evident for 48 hours or less, 23 had peritonitis of varying degrees, and five had localized abscesses. Among these patients who had had symptoms for more than 48 hours, 15 had localized peritonitis; 15 had abscesses of varying sizes, and six had diffuse peritonitis.

There were 26 errors in preoperative diagnosis. Of eight patients found to have acute appendicitis, the preoperative diagnosis had been small-bowel obstruction in four, incarcerated hernia in two, in-

* Williams, J. S., and Hale, H. W.: Acute appendicitis in elderly. ANN. SURG., **162**:208-212, (Aug.) 1965.

Editorials continued...

guinal hernias in one, and diverticulitis of the transverse colon in one. Of 18 patients in whom the preoperative diagnosis had been acute appendicitis, a variety of intra-abdominal lesions of other sorts were found. The most common of these were acute cholecystitis, perforated ulcer, mesenteric thrombosis and acute pyelonephritis.

The location of pain contributed to the confusion in diagnosis. Of 65 patients proved to have acute appendicitis, 56 had localized right lower quadrant tenderness, whereas in the group of 18 patients incorrectly thought to have acute appendicitis, 14 had localized right lower quadrant tenderness.

From their experience, the authors concluded that a right paramedian incision is preferable to a McBurney incision in that it provides better exposure for the performance of an appendectomy and for the correction of other intra-abdominal lesions.

In two-thirds of the cases, hospitalization for two weeks or longer was required. There were nine deaths in the group of 64 patients with surgically treated appendicitis, for a mortality rate of 14 per cent. All but one of the patients who died had been ill for more than 72 hours before operation, and all had had advanced associated diseases. Six died from uncontrolled infection, despite antibiotic therapy. The deaths of the remaining three were due to a cerebrovascular accident, myocardial infarction and massive pulmonary embolus.

As one might expect in a group of elderly patients, postoperative complications were common. There were 15 wound complications, including infection, hematoma, dehiscence, etc. Pulmonary complications occurred postoperatively in 10 patients, and cardiovascular difficulties occurred in seven. There were postoperative urinary-tract problems in three cases, and four patients had cerebral complications.

The study indicates that elderly patients with appendicitis seldom provide data for accurate diagnosis. The symptoms are usually minimal, and though all have abdominal pain, it is usually attributed to indigestion or constipation. The physical findings are few, except for abdominal tenderness, and it is often misleading or incommensurate with the severity of the underlying disease. Early perforation, gangrene and peritonitis are common in elderly patients with appendicitis.

In this series, the infecting organism seemed to be a factor in uncontrolled infections. In four of the six deaths due to infection, the offending organism was a Proteus which did not respond to antibiotics.

The high mortality rate appeared to be related to delays in diagnosis and treatment, to progressive, uncontrolled infection, and to the high incidence of associated disease.

TUBERCULOUS MENINGITIS

A report by Weiss and Flippin, from the Philadelphia General Hospital, upon the changing incidence and prognosis of tuberculous meningitis* is a dramatic demonstration of the progress that has been made in reducing the prevalence of this condition and in improving the therapy for it.

This writer is reminded of his experience on the pediatric service of a large charity hospital in 1924. When he finished that duty, he made a list showing the diagnosis for each patient admitted and the outcome in each case. That study revealed a surprisingly high mortality rate, but the most startling fact was that the majority of the deaths had been caused by tuberculous meningitis. The picture of a Negro youngster in a position of marked opisthotonus, and the complete inability of the medical staff to manage such cases can never be erased from his memory.

The Philadelphia physicians point out, in their report, that although effective antimicrobial therapy for tuberculous meningitis is less than two decades old, an almost miraculous reversal in prognosis has taken place. Their study was concerned with 102 cases of tuberculous meningitis treated between 1952 and 1961. They made it in an attempt to describe the changes that occurred, particularly the continuing fall in mortality and the rise in the incidence of neurologic sequelae. The hospital records of all patients discharged with a diagnosis of tuberculous meningitis in this nine-year period were reviewed. The minimum requirements for inclusion in the study were a lymphocytic reaction in the spinal fluid, and a clinical picture and course compatible with the diagnosis. A positive culture of tubercle bacilli was obtained in 55 per cent of the cases, and in an additional 24 per cent, bacterial or histologic proof of active tuberculosis in some part of the body was secured. All of the 102 patients received isoniazid; 99 also were given streptomycin; and 71 were given sodium para-aminosalicylate in addition to the other two drugs. Intrathecal streptomycin was given to 11 children during the first few years of the period under study, but that method of treatment was then abandoned.

During the entire period from 1952 to 1961 at the Philadelphia General Hospital there was a striking decrease in the annual incidence of tuberculous meningitis. In the years 1952-1954, there were 41 cases, for an annual incidence of 16; in 1955-1957, there were 32 cases, for an annual incidence of 11; and in the four-year period 1958 through 1961 there were 29 cases, for an annual incidence of 7. A few cases were not diagnosed before death, and thus did not receive therapy. For

* Weiss, W., and Flippin, H. F.: Changing incidence and prognosis of tuberculous meningitis. AM. J. MED. SC., **250**:46-59, (July) 1965.

the City of Philadelphia, only the records for 1960 to 1963 are available, but the downward trend of incidence is indicated by totals of 15 for 1960; 12 for 1961; 4 for 1962; and 8 for 1963.

Among the 102 hospitalized patients, there was a decreasing mortality in the succeeding periods of study: 56 per cent between 1952 and 1954; 47 per cent between 1955 and 1957; and 31 per cent between 1957 and 1961. The authors were particularly interested in determining what changes may have been responsible for the declining mortality. Age proved very important. Of 26 children under 10 years of age, five died (19 per cent). Of 45 patients between 11 and 40 years of age, 36 died (80 per cent). And of 31 patients over 40 years of age, 26 died (84 per cent). No significant change occurred in this pattern over the nine-year period.

Eighty-nine per cent of the patients in the study were Negroes. During the study period approximately one-fourth of the population of Philadelphia was Negro, but that segment provided one-half of the reported cases of active tuberculosis in that city. Proportionally, deaths among white and Negro patients with the disease were approximately the same, and there was no change in the distribution during the nine-year period.

Sex was not a significant factor, for the numbers of male and female patients were almost the same. Approximately one-half of the patients had had symptoms for more than a week before admission to the hospital. Neither sex nor duration of symptoms appeared to influence the mortality rates, and there was no change over the nine-year period.

The patients who were disoriented, confused, stuporous or comatose had significantly higher mortality rates than those who were mentally clear, and this factor, too, did not change during the years of the study.

As might be expected, active reinfection tuberculosis had a distinctly adverse effect on the mortality of the patients with tuberculous meningitis. However, there was a significant decrease in the proportion of patients with this associated infection between the second and third periods of the study, from 38 per cent to 10 per cent. Miliary tuberculosis appeared to have no influence on the mortality at any time during the years studied. There were five patients with accompanying heart disease and four with pneumonia in whom the associated disease had the effect of increasing the mortality.

There appeared to be a significant relationship between the spinal-fluid protein and chloride levels and the mortality. In patients whose spinal-fluid protein was less than 300 mg./100 ml., the mortality rate was 35 per cent, but in patients having over 300 mg./100 ml. the mortality rate was 65 per cent. Conversely, when the chloride was over 586 mg./100 ml., the mortality rate was 34 per cent, but when it was less than that amount, the mortality rate was 63 per cent. A cerebrospinal-fluid block occurred in 13 patients, and six of them died.

The use of corticosteroid increased in each succeeding series—7 per cent in 1952-1954; 41 per cent in 1955-1957; and 76 per cent in 1958-1961. However, according to the authors, the numbers of patients receiving corticosteroid therapy and those not receiving steroids were insufficient to determine the effect of hormones on the mortality.

In studying the 29 patients cared for during the last period, 1958-1961, the authors found that a considerably larger proportion had neurologic sequelae—34 per cent, as compared to 17 per cent in the 1952-1954 period and 12 per cent in the 1955-1957 span. These sequelae consisted of paresis of cranial nerves, optic atrophy, and various degrees of paralysis, from involvement of one extremity to paraplegia or tetraplegia. In analyzing these patients in relation to steroid therapy, the investigators found that 34 per cent of those receiving steroids had neurologic residua, compared to only 12 per cent of the patients who were not given steroids. They emphasize, however, that in 10 of the 13 patients with neurologic sequelae, there was evidence of neurologic damage before the start of steroid therapy. The increase in patients with neurologic sequelae, consequently, is attributed to the survival of patients who in previous years would have died.

In a minimal follow-up period of 20 months from date of admission, it was found that most deaths occurred during the first month. At the end of one month 62 per cent of the 102 patients were alive; at the end of three months 54 per cent were living; and at the end of a year 49 per cent had survived. Four patients were lost to follow-up between the third and twelfth month. There were no further reported deaths through the twentieth month.

Four of the 55 patients who were discharged alive had recurrences of meningitis as the result of inadequate treatment. These patients had had treatment for only two to seven months. Recurrences occurred between two months and four years after the discontinuation of therapy. Two of those four patients died.

This study of tuberculous meningitis revealed a steady decline in the number of cases treated, during the period from 1952 to 1961, and a decrease in mortality from 56 per cent to 31 per cent. Despite the decreased incidence and the lowered mortality, there was an increase in neurologic sequelae among those who survived the infection. That increase was attributed to the survival of patients who once might have died of tuberculous meningitis.

The authors point out that their study showed an association between the declining mortality rate and the fall in the incidence of associated reinfection pulmonary tuberculosis. No significant relationship could be established between mortality

Editorials continued...

and the use of steroids, and there was insufficient evidence to support their routine use in the treatment of tuberculous meningitis. The mortality rate rose with the patients' ages and in cases of associated diseases.

U. S. Chamber of Commerce Meeting in Dubuque

Physicians in northeast Iowa should plan to attend the "Aircade Meeting for Citizenship Action" sponsored by the U. S. Chamber of Commerce, at Wahlert High School, Dubuque, from 9:15 a.m. to 3:15 p.m. on Tuesday, February 15.

The first session of the 89th Congress, in 1965, put the federal government into the business of medical care, local voting rights, secondary education, highway beautification, urban affairs, water-pollution control, a war on poverty, and so on. In 1966, the second session will have to bring *order* into this jumble of laws.

It will have to find out how much the whole thing is likely to cost. It will have to find out where the money is coming from—or where the increasing deficit will lead. And what about inflation and the undermining of the dollar?

The second session will have to find out how to make the vast machinery for all of the new federal programs work.

Also, the second session will be under administrative pressure to pass 23 "must" bills which were not passed by the first session, including labor-union demands for repeal of 14(b), expansion of wage-hour benefits, and federalization of unemployment compensation.

To make your influence felt and your leadership count, your first step is to learn the facts. And it is facts that will be presented at the "Aircade." Anyone who attended such meetings in past years at Omaha and Des Moines will tell you that you can expect a fast-moving question-and-answer session.

Address your reservation request to the Dubuque Chamber of Commerce, 9th and Locust Streets, Dubuque 52001, and enclose a check for the $8 registration fee and the luncheon.

Class in Medical Terminology

A class in medical terminology, designed to help people who have daily contact with the language of medicine, will start at the Nurses Education Building of Iowa Methodist Hospital, Des Moines, on Wednesday, February 2. It will meet on that and the succeeding 20 Wednesday evenings at 7:00. The instructor is Miss Elizabeth R. Medzius, the medical record librarian.

The tuition is $15, and the price of the textbook, UNDERSTANDING MEDICAL TERMINOLOGY, THIRD EDITION, by Sister Agnes Clare, is $5 for those who don't already have it.

Penicillin Allergy

Penicillin hypersensitivity has been classified into the anaphylactic and the serum sickness-like reactions. The anaphylactic reaction appears within minutes after penicillin administration and all the characteristic symptoms of anaphylaxis, including death, may occur. Atopic individuals are most often affected, and their sera contain, for a short period, circulating antibodies to penicillin. The serum sickness-like form, which occurs with equal frequency in non-allergic and allergic individuals, is a delayed reaction appearing three to 30 days after penicillin exposure. This is the most frequent adverse reaction, and is unassociated with circulating antibodies to penicillin.

Direct skin tests using benzylpenicillin (penicillin G) as the antigen have not successfully predetermined pencillin allergy because there may be (1) negative tests prior to anaphylactic reactions, and (2) negative tests in individuals having had anaphylactic reactions. Furthermore, severe reactions may occur from the skin test itself.

Recently, immunologic investigation has revealed that some of the degradation products of penicillin exhibit antigenicity, and accordingly, extensive clinical trials with one of these, penicilloylpolylysine as a direct skin testing antigen, have been made. The primary objection to this test is that it gives too many false positive reactions.

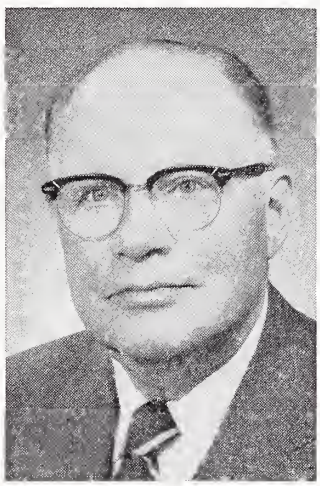
There are other diagnostic tests for penicillin hypersensitivity, but they have not been refined sufficiently for general clinical use; these are the serum hemagglutination and basophilic degranulation tests.

Patients suspected of being allergic to penicillin should be treated with an unrelated antibacterial drug. Atopic individuals without a history of penicillin allergy may be given penicillin if there is close medical supervision. When it is mandatory to determine the presence of penicillin allergy, both direct scratch tests with a dilute solution of benzylpenicillin (10,000 units/ml. or less), and direct intradermal tests with a dilute solution of penicilloylpolylysine are recommended.

Neither the substitution of penicillin in homologues nor the hyposensitization to penicillin is advised for use in an individual known to be allergic to penicillin.

—Edmund L. Keeney, M.D., of LaJolla, in CALIFORNIA MED., **103**:347, (Nov.) 1965.

President's Page



At the beginning of each new year one must take time to evaluate the problems and challenges that he must face during the ensuing months.

We of the medical profession have an interesting and challenging year ahead. Decisions and actions both of organized medicine and of each individual physician will in a large part determine the future of our profession in a new economy.

Your officers and executive staff will have long hours of work in protecting the physicians in Iowa so that they may continue to provide the best of health care. This will be especially true regarding third-party programs. It is of utmost importance that our philosophy of usual and customary fees be adhered to in all such negotiations.

Each county society must make certain that it has an efficient and fair claims-review committee. The burden of proving the desirability of usual and customary fees rests on the local county claims-review committees. If they fail, we are in danger of being proved wrong.

Each individual must stand ready to accept appointment to the utilization committees of his hospital staff or to the claims-review committee of his county society. I know that such work will be time-consuming, but each of us must give of himself if we are to preserve what we have and to exercise control of our changed economy.

Likewise it is a must for the local physicians to seize and maintain the lead in area-wide health-facilities planning. We must take a positive approach, or others will do the job for us.

Last, and by no means the least, each of us should contribute to and cooperate with IMPAC. Each dollar we give through the "packs" enhances medicine's influence on government. In addition, let's each of us support the party of his choice in his local community, by using his influence to see that fair-minded men are nominated and elected to office.

What is worth having is worth working and sacrificing for. We physicians of Iowa have an abundance, so let's use it in the interests of better patient care.

Frank G. Ober

President

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BOOK REVIEWS

MANAGEMENT OF THE PATIENT WITH CANCER, ed. by *Thomas F. Nealon, Jr.*, M.D. (Philadelphia, W. B. Saunders Company, 1965. $27.50).

To the mushrooming literature on cancer, this new book is a welcome addition. Seventy-one authorities have contributed to its excellence. Both general and specific considerations are dealt with, so that not only does one get a general idea of what is going on in the field, but one gets specific details about different types of neoplasms, as regards both diagnosis and treatment. The volume is moderate sized, with fine glossy paper, large print, excellent subtitles, graphs, pictures, photomicrographs, and bibliography in each chapter. Each subject had, of necessity, to be succinctly dealt with, or the material would have required many books.

It is understood that the subject matter dealt with will change rapidly during the coming years. Currently $215,000,000 a year goes into cancer research, as compared with less than $1,000,000 in 1941, but practicing physicians today are desperately in need of authoritative, general summary material, such as they will find in this excellent book. Our journals have only rare summary articles on any given topic, and these journals usually pile up, unread, in our studies. Books such as this are becoming more necessary than ever, to help us keep up with the knowledge explosion.

My only criticism of the volume is that the space devoted to the essential nature of neoplasms and to a summary of the basic research which is now being carried out is all too brief. I hope that in the next edition, more space can be devoted to this phase. As it stands, however, the entire volume is excellently conceived, and edited, and is of much greater value to the practicing physician than a stack of journals. It is excellent to read for short periods, and will be of inestimable value as a reference book in days to come. —*Daniel A. Glomset*, M.D.

DISEASES OF METABOLISM, FIFTH EDITION, ed. by *Garfield G. Duncan*, M.D. (Philadelphia, W. B. Saunders Company, 1964. $28.00).

This Fifth Edition of a widely used text in the broad field of metabolism has been carefully prepared by its great editor. He has utilized the same contributors as in the past editions, except for those chapters where new developments have warranted the selection of new authors. Most chapters have been extensively or completely rewritten. Seven subjects are dealt with fully for the first time in this issue: "Inborn Errors of Metabolism," "The Parathyroid Glands," "Metabolic Considerations in Functions and Disorders of the Digestive Tract," " . . . of the Nervous System," ". . . of the Circulatory System," and ". . . of the Respiratory Tract," and "Nutritional and Metabolic Aspects of Disorders of the Blood." Included in the 1,551 pages are complete reference lists.

The book is replete with tables. Figures showing metabolic pathways and structural formulas are to be found in each chapter. There are sufficient illustrations. The material unites the description of chemical events and cellular phenomena with their practical application at the bedside.—*Thomas D. Ghrist*, M.D.

BOOKS RECEIVED

RESPIRATORY CARE, by *H. H. Bendixen, L. D. Egbert, J. Hedley-Whyte, M. B. Laver*, and *H. Pontoppidan*, (St. Louis, C. V. Mosby Company, 1965, $15.00).

DIAGNOSIS AND THERAPY OF THE GLAUCOMAS, by *Bernard Becker*, M.D., and *Robert N. Shaffer*, M.D., F.A.C.S., (St. Louis, C. V. Mosby Company, 1965, $18.50).

RADIOLOGIC DIAGNOSIS IN INFANTS AND CHILDREN, by *Armand E. Brodeur*, M.D., M.Rd., F.A.C.R., (St. Louis, C. V. Mosby Company, 1965, $26.50).

OPERATIVE OBSTETRICS, by *R. Gordon Douglas* and *William B. Stromme*, (New York, Appleton-Century-Crofts, 1965, $22.50).

CONTROVERSY IN INTERNAL MEDICINE, by *Franz J. Ingelfinger*, M.D., *Arnold S. Relman*, M.D., and *Maxwell Finland*, M.D., (Philadelphia, W. B. Saunders Company, 1965, $14.50).

FERMENT IN MEDICINE, by *Richard M. Magraw*, M.D., (Philadelphia, W. B. Saunders Company, 1965, $6.50).

MODERN TREATMENT, Vol. 2, No. 6, TREATMENT OF VENOUS DISORDERS, edited by *John A. Spittell, Jr.*, M.D., TREATMENT OF DISORDERS OF THE EAR, NOSE, AND THROAT, edited by *Walter H. Maloney*, M.D., (New York, Hoeber Medical Division, Harper & Row, Publishers, 1965, $16.00 per year).

THE HEART AND CIRCULATION, Vols. 1 & 2, Second National Conference on Cardiovascular Disease, edited by *E. Cowles Andrus* (Bethesda, Federation of American Societies for Experimental Biology, 1965, Vol. 1—$3.50, Vol. 2—$1.50, Summary—$.50).

FUNDAMENTALS OF CLINICAL HEMATOLOGY, by *Byrd S. Leavell*, M.D., and *Oscar A. Thorup, Jr.*, M.D., (Philadelphia, W. B. Saunders Company, 1965, $12.50).

PEDIATRIC THERAPY, edited by *Harry C. Shirkey*, B.S., (Pharm.), M.D., F.A.A.P., (St. Louis, C. V. Mosby Company, 1966, $18.50).

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Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

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Actions of the IMS Executive Council

Fiscal Intermediary for Part B, Public Law 89-97 (Medicare). The Executive Council was informed that during the recent AMA Interim Session in Philadelphia, Society representatives met on two occasions with Mr. Arthur Hess, director of the Bureau of Health Insurance, Department of Health, Education and Welfare, to discuss the designation of a fiscal intermediary for Iowa under Part B, P.L. 89-97, and that encouraging and positive information regarding the Society's role in this regard was received.

It was reported that as a result of those conferences, the Board of Trustees met in executive session in Philadelphia and agreed that, based on information provided by Mr. Hess, it would be desirable to arrange an informal meeting between IMS and Blue Shield officials to consider the feasibility of filing what would, in effect, be a joint application by the IMS and Blue Shield to serve as fiscal intermediary.

A joint meeting between Blue Shield and IMS officials had then been held, on Sunday, December 5, to review specific recommendations from the IMS Board of Trustees relative to the possible designation of Blue Shield as fiscal intermediary under P.L. 89-97, and the delegation of certain responsibilities to the IMS.

The Executive Council of the IMS approved the following resolution:

1. That the Memorandum of Understanding between the Iowa Medical Society and Iowa Medical Service (Blue Shield) dated September 12, 1956, as amended, be and it is hereby ratified and confirmed;

2. That the joint statement of the Executive Committee, Iowa Medical Service (Blue Shield) and representatives of the Board of Trustees, Iowa Medical Society, published at pages 425-426 of the July 1965 issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY be and it is hereby ratified and confirmed and declared to be applicable as a guide both to the Iowa Medical Society and Iowa Medical Service (Blue Shield) in determining their relationships under Public Law 89-97 in the event Blue Shield is designated as "carrier" for the State of Iowa under said Part B;

3. That the letter from C. W. Seibert, M.D., Chairman of the Iowa Medical Society Board of Trustees, to George H. Scanlon, M.D., Chairman, Board of Directors of Iowa Medical Service, dated December 8, 1965, and the proposal transmitted therewith, be and they hereby are approved as stating the specific objectives and aims of the Iowa Medical Society in working in the closest possible mutual cooperation with Iowa Medical Service (Blue Shield);

4. That the Iowa Medical Society hereby gives full and complete support and endorsement to Iowa Medical Service (Blue Shield) in its application to be designated as "carrier" under said Part B; and that the Board of Trustees of the Iowa Medical Society is hereby authorized and directed to do any and all things necessary or desirable to implement the aims and objectives of the Iowa Medical Society as provided by actions of the House of Delegates of the Iowa Medical Society, by AMA policy and by the policy established by the Executive Council of the Iowa Medical Society;

5. That in view of the foregoing, Iowa Medical Society not file a formal application to be designated as "carrier" under said Part B.

REGULAR MEETING ON JANUARY 12

Public Law 89-97. It was announced that a special briefing session on matters pertaining to implementation of P.L. 89-97 is to be held on Sunday, February 6, at the Savery Hotel, Des Moines. The program, to begin at 10:15 a.m., is to include talks by representatives from the Department of HEW, the AMA, the IMS, the State Department of Health, the State Department of Social Welfare, Blue Cross, Blue Shield, and the Health Insurance Council. A status report on the IMS usual and customary fee project is also to be presented.

Members of the Council were told that all IMS members will be invited to the conference and encouraged to attend.

It was reported that, in accordance with the action taken by the Executive Council at its December 7 meeting, a letter had been transmitted to Mr. Arthur Hess, director of the Bureau of Health Insurance, Department of Health, Education and Welfare, informing him that the IMS supports and endorses Iowa Medical Service (Blue Shield) as fiscal intermediary for Iowa under Part B, P.L. 89-97. The Council was informed that Blue Shield had submitted a formal application to the Department of HEW, and that although the application had been acknowledged, no official designation of a fiscal intermediary had yet been made.

Building Project. It was announced that construction of the new IMS headquarters office building at 10th and Grand, West Des Moines, has been completed, and will be ready for occupancy sometime in February. It was also reported that the present headquarters building had been sold to the Iowa Heart Association.

Usual and Customary Fee Survey. The Council was informed that data obtained from the recent IMS usual and customary fee survey is being abstracted and tabulated, and median, mean and weighted-mean figures will soon be available for

negotiations with third parties at the county and state levels.

On recommendation of the Society's actuarial consultant, the Executive Council amended a previous action regarding distribution of those data, by approving a motion embodying the following specific recommendations:

1. That weighted means for 97 specified procedures be made available to the president or secretary of a county medical society on request, and that the information be used by the county society to negotiate with third parties at the local level. (In this connection, it was stressed that the data shall be classified information, and designated as a negotiating instrument for use by the county medical society, not by a third party.)

2. That weighted means for 97 specified procedures for a limited number of counties or geographic areas be made available to third parties at the state level.

It was emphasized that the weighted-mean figures should be made available only to determine costs—i.e., as a "mean" schedule, not a fixed-fee schedule.

It was acknowledged that the Executive Council had previously authorized the Society to make median figures available to county medical societies for negotiations with third parties, and it was reported that IMS staff would be prepared to compute this information whenever necessary.

Blue Chip. It was reported that the Board of Trustees of the Iowa Medical Society and the Executive Committee of Blue Shield met in joint session on Tuesday evening, January 11, to discuss possible modification of the Blue Chip policy, in accordance with the recommendations of the 1965 House of Delegates. Although the members of the Executive Committee were not unanimous regarding the desirability of maintaining a usual and customary fee contract, both Blue Shield and Society officials expressed the opinion that a Blue Chip usual and customary fee contract can be properly implemented and administered if (1) "community" is properly defined; (2) administrative guidelines are developed; and (3) county claims review committees function fairly and effectively.

The Council was told that as a result of the joint session between Society and Blue Shield officials, the actuaries for IMS and Blue Shield were requested to develop specific recommendations regarding the Blue Chip contract, for consideration at a future meeting.

The Council was informed that Blue Shield's current Federal Employees' Program has been extended until May, 1966, to provide an opportunity for the IMS House of Delegates to consider an increase in the service income level contract from $6,000 to $7,500. The opinion was expressed that although the government would prefer a $7,500 income level contract with a fixed fee schedule, it almost certainly will be willing to consider a usual and customary fee program.

Medical/Hospital Statistical Study. It was reported that a medical/hospital statistical study, which is being conducted jointly by the IMS and Iowa Hospital Association, had been initiated in November and would continue through April. Twenty-seven hospitals are participating in the study, and reports of discharges will be tabulated on data-processing equipment belonging to Blue Cross, and then analyzed and refined by the joint committee. It is anticipated that specific conclusions resulting from the survey can be presented to the House of Delegates in April.

Heart Disease, Cancer and Stroke Act (DeBakey Commission Report). It was announced that the Society's president had met with the dean of the University of Iowa College of Medicine, and with the Commissioner of Public Health, to discuss implementation in Iowa of the Heart Disease, Cancer and Stroke Amendments of 1965, and the possible use of federal funds to be made available as a result of them.

The Council was informed that the dean has invited representatives from the Iowa Division of the American Cancer Society, the Iowa Heart Association, the Iowa Hospital Association and the Iowa Society of Osteopathic Physicians and Surgeons, along with IMS and public health officials, to serve on a planning committee to consider matters in connection with applying for federal funds available under the 1965 Amendments. It was announced that the planning committee would meet sometime in January, and the Society would be kept apprised of its progress and recommendations.

It was emphasized that whatever program is developed in Iowa, the dean is desirous of protecting and maintaining the status of University Hospitals as a teaching and research center, and further that he will resist involvement in any extensive program of patient care which is not needed for teaching and research functions.

Major Medical Program. Informational materials were distributed on major medical coverage ($20,000) to be made available under the statewide Physicians' Group Program. The Council was informed that the program had been approved by the IMS Board of Trustees, in accordance with an action by the 1965 House of Delegates, and on recommendation of the Society's Group Insurance Committee. Specific details regarding the plan are to be provided to all Society members by Blue Cross and Blue Shield.

Senior Day. It was announced that the 12th Annual Senior Medical Student Conference, sponsored by the IMS for senior medical students and their wives, would be held in Iowa City on Saturday, January 29. Society officers and other representatives were to present talks on pertinent socio-

economic subjects in the afternoon, and a dinner-dance had been scheduled for the evening.

1966 Annual Meeting. The Council was informed that the program for the 1966 IMS Annual Meeting is nearly complete, and that in addition to scientific presentations, a talk will be given by Mr. James Hagerty, a vice-president of the American Broadcasting Company. Mr. Hagerty was press secretary to the President of the U. S. during the Eisenhower administration.

AMA Council on Medical Service. The Executive Council approved a motion that the IMS utilize all of its facilities in promoting the nomination and election of H. J. Smith, M.D., Des Moines, to the AMA Council on Medical Service. Dr. Smith is an IMS delegate to the AMA.

PKU Control Program in Iowa

THE LAW

Iowa law now declares it to be state policy that every infant born within the state, insofar as possible, shall be tested for phenylketonuria (PKU) within a reasonable period following birth. The implied purpose of this law (SF 463, 1965 Legislature) is to insure mass screening for the disease as soon after birth as reliable testing is possible, and before affected infants are irreparably damaged as a consequence of the disease. The State Department of Health has been given prime responsibility for this policy, and cooperation is expected from all state and local health and welfare agencies.

THE DISEASE

Phenylketonuria is a familial disease inherited as a simple recessive Mendelian trait. It occurs in one-fourth of all children whose parents are both carriers of the defective gene for the trait, but who do not themselves show evidence of PKU. Recent surveys indicate an incidence of about 1 in 10,000 births. Most untreated children suffer mental deterioration, and it has been estimated that it accounts for approximately one per cent of admissions to institutions for the mentally defective.

PKU is caused by a deficiency of a liver enzyme which normally converts the essential amino acid phenylalanine to tyrosine. Phenylalanine is present in all naturally occurring proteins, and is present in blood plasma of normal newborn infants in a concentration of less than 4 mg. per cent. It accumulates in the blood to abnormally high levels when normal conversion to tyrosine is blocked. Soon thereafter, there is urinary excretion of phenylalanine, as well as phenylpyruvic acid and other abnormal metabolites. The brain damage which progresses rapidly in untreated children is thought to be due to the toxic effects of increased blood and tissue levels of phenylalanine or its abnormal metabolites, but the exact mechanism has not been determined.

DIAGNOSIS OF PKU

Successful screening can be accomplished by means of the Guthrie test or one of the accepted methods of direct blood-phenylalanine assay. Guthrie test materials are available from most laboratory supply houses, and any hospital with laboratory facilities can perform the test. The Guthrie test also has the advantage of simplicity, for a droplet of blood obtained by heel-stick and absorbed onto filter paper serves as an adequate test sample. Semi-micro tests utilizing blood collected in capillary pipettes present little more difficulty of collection. These direct quantitative tests require more elaborate facilities and more highly skilled personnel, and hence are practical only if a large number of tests are to be done. With either type of test, the sample may be stored for several days, or transported to a distant laboratory if necessary.

A recent survey by the Iowa Association of Pathologists indicated that all hospitals in Iowa with pathologist-directed laboratories have access to one or several of the approved methods of PKU testing. Several laboratory directors have expressed readiness to perform quantitative blood-phenylalanine assays on referral, in any predictable numbers. Such referral facilities should prove most valuable to those who have a relatively small number of infants to be tested, or to those wishing confirmatory testing of doubtful cases.

PRECAUTIONS

Observance of the following points is necessary if a screening program is to be successful:

1. *Adequate preparation of the newborn, so as to avoid false-negative results.* Food intake prior to testing must have provided enough protein as a source of phenylalanine to make the test meaningful. The Committee on Prevention and Diagnosis, of the Iowa Task Force to Combat Mental Illness, recommends that testing of bottle-fed infants be done no sooner than 48 hours after the first successful formula feeding. Testing of breast-fed ba-

bies may not be valid before one week of age, since breast milk often has little protein content before the fifth day.

2. *Recognition of misleading tests in premature or otherwise handicapped infants.* Blood-phenylalanine levels may remain low if food intake or digestion is impaired. Abnormally high levels may occur if digestion is adequate but metabolism is impaired by decreased liver function associated with prematurity or some other complicating factor.

3. *Confirmatory testing of questionable cases.* The fallibility of all diagnostic procedures should be acknowledged. Repeated testing should be done in all doubtful instances, including all positive cases and all negative cases with any suggestive clinical findings.

It is likely that reference laboratories such as the State Hygienic Laboratory in Iowa City should be called upon to evaluate doubtful test results.

4. *Routine repeat testing at four to six weeks of age.* This should be done to check for false-negative results that may have been obtained in the newborn period, and to make sure of testing infants who may have been missed in the initial screening.

TREATMENT

Early effective treatment of PKU is of the utmost importance, for without it any detection program loses its value. Normal development of the affected infant depends upon the use of a diet low in phenylalanine beginning in the early weeks of life, before irremediable brain damage has taken place. Such a specially prepared synthetic diet (Lofenalac) is now available. As the child grows older, less strict dietary regulation is required, but there may be considerable variation in individual cases. The management of the patient is of such complexity that it is best accomplished with the help of a special treatment center. Such a facility is available at the Child Development Clinic of the Department of Pediatrics, University Hospitals, Iowa City, and any case found within the state may be referred to that clinic. The long-term management of the afflicted child will require the combined efforts of the parents, the home physician, local and state social and health agencies, and a special clinic.

EDUCATION

The success of a program for the detection and management of phenylketonuria depends upon the informed teamwork of many people, including parents, physicians, hospital officials, and state and local health and social welfare agencies. The exchange of information among all of these is vital. Dr. Madelene Donnelly, chief of the Division of Maternal and Child Health, State Department of Health, can supply much helpful information and advice concerning problems of detection and management.

All positive PKU tests should be reported to Dr. Donnelly before treatment is sought. The Iowa Association of Pathologists and its individual members are prepared to help with problems concerning test procedures or facilities. The State Hygienic Laboratory, in Iowa City, is available as a reference laboratory, and Dr. William Hausler, the director, will cooperate with consulting pathologists and hospital personnel in helping to establish local laboratory referral services.

Revised Medical Reporting Form for Social Security Disability Purposes

Recently, studies in six states demonstrated that doctors could give a clearer, more complete clinical picture of a claimant applying for Social Security Disability Benefits by using a medical reporting format. The physicians' preference in these states led to replacing of the old-style questionnaire with this new narrative report form.

As a result, the Social Security Disability Program is introducing nation-wide a revised form designed to provide ample space and a more effective format for detailing the patient's history, physical, and laboratory findings. This format and space will help doctors transcribe those parts of the patient's chart pertinent to his impairment.

Reviewing physicians of the Iowa Agency evaluate a patient's claim, chiefly on the basis of the medical information that the family or treating physician submits. Each case report is required to contain objective medical evidence so that a proper determination can be made by an independent medical doctor reviewing that case. Consequently it is hoped that the new narrative form of reporting will provide even more meaningful information on which to evaluate a patient's claim.

As you know, the Social Security Disability Program pays monthly benefits to disabled workers under the age of 65, and their dependents. Families can receive as much as $309.00 a month. The average beneficiary with a long-term disability can receive over $11,000 from the program. Currently, some 17,201 Iowa residents are benefiting from the disability program. These figures emphasize the economic importance of the medical reports that Iowa physicians submit on behalf of their patients.

Physicians participate in the disability program in other ways as well. By advising a disabled patient of the State Vocational Rehabilitation Program and the opportunities this Agency offers, they help him secure benefits due him. In fact, were it not for referrals from doctors, a significant

number of qualified persons would lose some or all benefits.

When the family or treating physician reports the data that are necessary to an evaluation of the patient's remaining capacity to work, they are helping him receive prompt, sound handling of his claim.

The above information is offered in order that we in Iowa, without violations of our personal standards or private philosophies, may continue to respond to the human needs of our society.

Following are the headings, and indications of the amounts of space provided for the respective narratives on the new form:

Page 1

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
SOCIAL SECURITY ADMINISTRATION

Form Approved.
Budget Bureau No. 72-R510.7

MEDICAL REPORT
(General)

DATE OF THIS REQUEST

Notice to Physician:
Please include sufficient details of history, physical and diagnostic findings, clinical course, therapy and response to enable a reviewing physician to make an independent determination as to the severity and duration of the impairment.

(1) IDENTIFYING INFORMATION (To be completed by Requesting Office)	PATIENT'S NAME	DATE OF BIRTH	SOCIAL SECURITY ACCOUNT NO.
	WAGE EARNER'S NAME (If different from patient)	ADDRESS OF REQUESTING OFFICE	

I. HISTORY: (Give complaints, past and present, clinical course, including therapy and response.)

(A space 7 in. wide and 6¼ in. deep is provided for this information.)

DATE OF INJURY OR FIRST SIGNS OF ILLNESS	DATE IMPAIRMENT PREVENTED WORK	DATE YOU FIRST EXAMINED PATIENT	FREQUENCY OF VISITS	DATE OF LAST EXAMINATION

FORM SSA-826 (9-65)

Pages 2 and 3

II. PHYSICAL FINDINGS: Please show all pertinent findings (with dates).

HEIGHT	WEIGHT

(All of the remainder of page 2 and all of page 3—the equivalent of a space 7 in. wide and 17½ in. deep—are provided for this information.)

Page 4

III. LABORATORY AND SPECIAL STUDIES: Give results with dates. (Hemoglobin, Hematocrit, Sedimentation rate. Cerebrospinal fluid, Blood chemistry, Urinalysis, Sputa (smear, culture), Serology, X-rays, Electrocardiogram, Liver function, Bronchoscopy, Myelogram, Biopsy, Pulmonary function, Renal function, Psychometric, etc.)

(A space 7 in. wide and 4¾ in. deep is provided for the results of such studies.)

IV. DIAGNOSES:

1.

2.

3.

(An additional 1¾ in. of space is provided here.)

REPORTING PHYSICIAN'S NAME AND ADDRESS	SIGNATURE	TITLE
	TELEPHONE NUMBER	DATE

U. S. GOVERNMENT PRINTING OFFICE: 1965 0-787-738

An antibiotic of choice is one that works

TAO works

Susceptibility Results
Staphylococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
6,725	1962	88.6%
5,440	1963	88.0%
10,384	1964	88.5%

β-Hemolytic Streptococci [2,3,1]

2,448	1962	89.5%
1,519	1963	95.2%
2,492	1964	96.7%

The Product

In a world study of antibiotics *in vitro*[1], TAO had an overall effectiveness of 87.3%, higher than chloramphenicol and erythromycin, and significantly higher than tetracycline and penicillin.

The Plus... Consistent Performance

Yet antibiotics must not only work. They must work consistently. Here are the results from the largest study of microbial susceptibility ever undertaken. In 29,048 cultures of overt staphylococcal and β-hemolytic streptococcal infections, note the consistency of results with TAO.

TAO®
[triacetyloleandomycin]

J. B. Roerig and Company, New York, New York 10017
Division, Chas. Pfizer & Co., Inc., Science for the World's Well-Being®

TAO Rx information

Indications: The bacterial spectrum includes: streptococci, staphylocci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **Contraindications and Precautions:** TAO (triacetyloleandomycin) is not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents, of course, should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. It is contraindicated in pre-existing liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. **References:** 1. Isenberg, Henry D.: Health Laboratory Science **2**:163-173 (July) 1965. 2. Fowler, J. Ralph et al: Clinical Medicine **70**:547 (Mar.) 1963. 3. Isenberg, Henry D.: Health Laboratory Science **1**:185-256 (July-Aug.) 1964.

THE DOCTOR'S BUSINESS

Give Yourself Ample Time

HOWARD D. BAKER
Waterloo

In recent years, great emphasis has been placed upon the importance of a man's having adequate capital to provide himself a comfortable income at retirement age. However, little importance has been attached to his achieving a degree of financial independence *before* retirement age. This is a grave error.

The years 45 to 64 have become the truly critical ones in a man's financial life. The young man in his thirties who fails to start saving and investing, on the theory that there is still "plenty of time," is suffering from a grave delusion.

Facts indicate that if the "average" person has not accumulated a reasonable amount of capital by age 45, he is unlikely ever to do so. He has started his search for financial security at too late an hour, and the odds are strongly against his gaining sufficient momentum to make up for lost time. There are two reasons for this: one is pure arithmetic, and the other reflects the economic and psychological influences under which we live. The arithmetic is simple. We all know that a dollar we save today is worth considerably more than the dollar that we *may save* 20 years in the future, for today's dollar, invested wisely, will earn more dollars as the years go by. For example, based upon 5 per cent annual compound interest, to accumulate $1,000 at age 65 requires an investment of:

$142 at age 25
$181 at age 30
$231 at age 35
$295 at age 40
$377 at age 45
$481 at age 50
$614 at age 55
$784 at age 60

Stated in another way, $181 invested at age 30 will grow to $1,000 at age 65, if one assumes a 5 per cent increment. The same $181 invested at age 50 will grow only to $375. If invested at age 60, it will increase merely to $232.

It is obvious from these figures that $1 invested at age 30 will accomplish as much as $2 invested at age 45, and it is worth as much as nearly $4.50 invested at age 60. As rates of return and appreciation go up, the value of early investing is magnified. In the capital-building process, the greatest allies a man has are (1) time, and (2) return on capital. They must work together if one is to accomplish his financial goals. Take away *time*, and capital is denied an opportunity to grow. If capital must accomplish too much too soon, there is a great risk that it will disintegrate as a consequence of over-speculation.

Take away *yield,* the opportunity to invest productively, and only a very few men could set aside enough from their earnings to accomplish any degree of financial independence. It is capital at work—not the man at work—that brings eventual financial independence. True, a man must work and save in order to provide basic capital, but afterward his degree of financial independence will be directly dependent upon the *time* for capital growth, and upon the productivity or *yield* he realizes upon his invested capital.

Let's call a spade a spade! Can any man say that he is financially successful—whatever his income from his profession—when he has little or no income to report on page 3 of his Federal Income Tax return? A man of 45 should be well on his way toward accomplishing his financial objectives, rather than just starting toward them. The investor who lulls himself into believing that he will start his program *after* his home has been luxuriously furnished, *after* his children have been educated, *after* he has traveled to Europe and many other *afters* is in for a rude awakening. Both time and simple arithmetic are building up strong odds against him.

The ingredients for success are an early start and tenancity in carrying out the plan. These things will guarantee accomplishment; complacency and postponement will assure failure.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was a agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Postgraduate Education

JOHN M. HENNESSEY, M.D.
Manilla

Our AAGP has become the second largest medical society in the United States. And, like the famous second-ranking car rental service, "We try harder."

One of the fundamental differences between the AAGP and other medical societies is its educational requirement. It is necessary for a member to secure 150 hours of postgraduate education every three years. Fifty of those hours must be in Class I—that is, in courses that have been sponsored or co-sponsored by the Academy, or presented by the medical schools and approved by the AAGP. One can accumulate the other 100 hours by attending staff meetings, state and local medical meetings, etc. This educational requirement was put into the AAGP constitution because medicine is an ever-changing profession. New ideas and new technics in treatment are being developed daily, and the general practitioner needs to keep up if he intends to practice the type of medicine that is best for his patients.

In order that the general practitioner may fulfill his educational requirement, the local chapters make it as easy as possible for him to get the essential credit hours, and with a minimum amount of time away from his office. For example, in 1965 the Iowa Chapter sponsored five courses providing 58½ hours of Class I credit:

February	Iowa City Refresher Course	25½ hours
May	Denison, Iowa	5 hours
June	Spring Conference, Okoboji	11½ hours
September	Annual Meeting, Des Moines	11½ hours
November	Lederle Symposium, Des Moines	5 hours

Two of those were one-day meetings, one was a two-day meeting, one was a three-day meeting, and the Refresher Course was a four-day program. Besides those just listed, several one- or two-day meetings acceptable for Class I credit were presented by the U. of I. College of Medicine.

The AAGP members who attended most of these meetings, and those who attended only a few, have found that they provided them some valuable help in their practices, and in addition, gave them a refreshing change from the load of everyday practice. After such an interlude, the physician goes back to work better able to cope with routine problems. Usually his patients appreciate that his absence really benefits them, and they are pleased to know their physician is trying to keep up with the changing medical world.

In spite of the fact that the state chapter and the U. of I. College of Medicine cooperate in making it easy for AAGP members to accumulate their extra hours of education, there are some physicians each year who must be dropped because of a lack of credit hours. Such instances are few, however, and we are sure that most of these men could have arranged to attend a few of the courses.

The Academy believes these educational courses are good for the mind, and that the relaxation they provide is good for the body. So we can only repeat the words of Mark, "Physician, heal thyself."

Attend the
GP Refresher Course

February 15-18, 1966

University of Iowa
College of Medicine
Iowa City

She's on a diet.
She's discouraged.
She needs your help.

You can encourage her with DEXAMYL®
brand of dextroamphetamine sulfate and amobarbital

'Dexamyl' is the mood-lifting anorectic; it not only assures unexcelled control of appetite but also improves outlook.

Formula: Each 'Dexamyl' Spansule® (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming]. *Principal cautions and side effects:* Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild. *Before prescribing, see SK&F product Prescribing Information. Smith Kline & French Laboratories, Philadelphia* SK&F

Iowa Association of Medical Assistants

Seek and Ye Shall Find

Since we are already one month into the New Year, it is a good time for us to take stock and see what we have done or can do to increase our efficiency.

Is filing a problem for you? What can you do to improve existing files? Organization is often the solution to filing problems. Or perhaps we should say that the lack of organization creates problems.

In addition to the books that have been written as specific aids for the medical assistant, many of the publications which come regularly to our employers contain articles slanted toward the assistant. If you find something in any of those magazines or journals which can be helpful to you in your work, ask your employer for permission to remove the necessary pages for your file. The newsletters which many pharmaceutical companies are sending to our offices contain valuable suggestions for members of the physician's office staff. "Office Lights" by Warner-Chilcott, of Morris Plains, N. J., and "Nurse's Notes" by E. R. Squibb & Sons, 745 Fifth Ave., New York City 10022, are two that come to my mind at the moment.

Start by sorting your accumulation, and make up file folders with headings for the various categories you use most frequently. If you haven't been saving suggestions, this is a good time to start. We suggest the following:

ADDRESSES: 1. Alphabetical listing of the insurance companies for which your employer does physical examinations. Include, for each of them, the names of agents for your area, the address to which each complete examination report is to be sent, and the address you use in sending the payment voucher.

2. Alphabetical listing of the companies to which you send workman's compensation claims.

3. Addresses and telephone numbers of the friends or relatives of your employer to whom you occasionally write or direct packages, or are asked to telephone.

CALENDAR: 1. Due dates and addresses to which monthly or quarterly reports are sent.

2. Due dates and addresses to which membership fees are sent.

3. Renewal dates on publications for the reception room.

4. Renewal dates of professional publications for which subscriptions are not paid by membership fees.

5. Employer's birthdays and anniversaries, if it is your duty to remind him of them.

COLLECTIONS: 1. Hints to increase collections.

2. List of delinquent accounts, with current notations of action taken and receipts.

3. Sample letters as collection aids.

4. List of accounts that have been given to a professional collection agency.

EQUIPMENT: Dates of purchase, from whom purchased, warrantees, names of agents for purchase of supplies or maintenance/repair service for each piece of equipment—sterilizer, typewriter, bookkeeping equipment, T.V., etc.

HOUSEKEEPING: 1. Hints for maintenance of equipment.

2. Names and suppliers of specialty items such as germicidal soaps, floor cleaners, etc.

3. Names, addresses and telephone numbers of persons responsible for janitor service, lawn service and snow removal.

INVENTORY: 1. List of supplies, including dates, amounts and from whom purchased.

2. List of all office equipment such as furniture, instruments, etc. which are to be depreciated, and dates of acquisition.

PHARMACEUTICAL REPRESENTATIVES listed alphabetically according to company represented. Include names, office addresses and telephone numbers.

EMERGENCY INFORMATION: 1. Name, address and telephone number of night watchman, if applicable.

2. Address and telephone number of nearest poison-control center.

3. First-aid book.

Look through MEDICAL ECONOMICS, or one of the books by Horace Cotton or Miriam Bredow for additional suggestions on filing, or consult your local librarian for assistance in setting up a filing system to meet your specific needs. Check the table of contents of each publication that comes into your office for articles of particular interest to the medical assistant. You will be surprised at the number carrying interesting and informative material. Ask the pharmaceutical representatives calling in your office whether their companies publish newsletters which can be mailed to you. A wealth of information is available.

—Helen G. Hughes

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Malaria in the U. S. A., 1965*

Through December 23, case report forms documenting a total of 80 confirmed and presumptive cases of malaria occurring during 1965 in the United States had been received by the Parasitic Diseases Unit of the Communicable Disease Center. The age and sex distributions of these 80 cases are shown in Table 1. It will be noted that 67 were in males, and that 51.3 per cent of the total cases occurred in the 20-29 year age group.

TABLE 1

AGE AND SEX DISTRIBUTION OF CASES OF MALARIA
UNITED STATES, 1965*

Age Group	Male	Female	Total	Per Cent
0-9	2	3	5	6.3
10-19	7	4	11	13.8
20-29	38	3	41	51.3
30-39	6	2	8	10.0
40-49	3	1	4	5.0
50-59	3	—	3	3.8
60-69	1	—	1	1.3
70+	—	—	—	—
Unknown	7	—	7	8.8
Total	67	13	80	100.0

* Reported as of December 23, 1965.

There were 43 cases in civilians, of whom six were Peace Corps workers and two were merchant seamen; the other 37 cases were in military personnel.

As the year progressed there was an increase in the proportion of military personnel among the cases reported by date of onset of the illness. During the four quarters of the year the increase was:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
23.5%	35%	52%	56%

This increasing ratio of military to civilian cases is related to the return of service men who have been infected in Viet Nam.

* U. S. Public Health Service, Morbidity and Mortality Weekly Report for week ending December 25, 1965.

Of the total of 80 cases, the distribution by species of parasite in 75 instances is shown in Table 2. The country of origin in 20 of the 80 reported cases was Viet Nam. In 10 of those 20, the parasite was Plasmodium falciparum; P. vivax was identified in eight; and the species was not identified in two instances.

TABLE 2

CONFIRMED CASES OF MALARIA BY SPECIES
UNITED STATES, 1965*

Species	Total	Per Cent
P. vivax	50	66.7
P. falciparum	18	24.0
P. malariae	5	6.7
P. ovale	2	2.7
Total	75	100.0

* Reported as of December 23, 1965.

Although no malaria cases were reported in Iowa in 1965, it is to be expected that we shall have Iowa people returning with malarial infections acquired in Viet Nam or elsewhere. In the interest of the National Malaria Surveillance Program, it is important that these be reported promptly to the State Department of Health.

It must be remembered that some of the strains of P. falciparum are resistant to the newer antimalarial drugs. Quinine is the drug of choice in the treatment of these resistant forms.

Have You Sent Us Your Change-of-Address?

Postal regulations now forbid the forwarding even of first-class mail, in some instances, without payment of extra postage. Even when a house number is slightly incorrect and when the postman knows the addressee, the rules forbid delivery. We urge promptness on the part of member physicians in reporting address changes or inaccuracies.

Clostridium Perfringens Food Infection

JOHNSON COUNTY
1965

"On Saturday, November 6, 1965, prior to a football game, a luncheon was served in a home to approximately 50 guests. The meal consisted of a spaghetti casserole, jello salad, rolls, butter and chocolate brownies. A local restaurant prepared the spaghetti casserole sometime early in the morning of November 6, and it was picked up at 10:30 a.m. The casserole consisted of noodles, mushrooms, tomatoes and ground beef. The luncheon was served around 12 o'clock noon. Eighteen of the guests became ill between six and 20 hours after the luncheon. The most common complaints were severe abdominal cramps, diarrhea and headache.

"Prior to the luncheon, some of the spaghetti had been removed and placed in a home freezer. On Sunday, November 7, samples of frozen spaghetti, of refrigerated spaghetti and of a stool specimen from one of the patients with diarrhea were submitted for laboratory examination.

LABORATORY RESULTS

	Clostridium perfringens	Enterococci
Frozen spaghetti	2×10^3 orgs/Gm	5×10^3 orgs/Gm
Refrigerated spaghetti	7×10^3 orgs/Gm	5×10^9 orgs/Gm
Stool specimen	3×10^5 orgs/Gm	

"Subcultures of Clostridium perfringens from all three sources were submitted to the Laboratory Branch, USPHS Communicable Disease Center, Atlanta. All isolates were identified as Cl. perfringens Type A. Although this organism has been the suspected agent in several food-borne illnesses in Iowa in recent years, this was the first laboratory confirmation to be reported.

"Onset of symptoms occurred from six to 20 hours after the meal at which the incriminated casserole was served, and the average onset occurred eight hours later. Recovery was complete at about 24 hours after onset in most instances.

"The most common preliminary complaint was a severe frontal headache.

"On November 12 utensil swabs were taken from eight areas (4 sq cm) of the restaurant food preparation area. Bacterial counts per area ranged from less than 40 to too numerous to count."

The above report is a summary of an investigation made and reported to the State Department of Health by Dr. W. J. Hausler, Jr., director, State Hygienic Laboratory, and Dr. Ian Smith, professor of internal medicine, U. of I. College of Medicine.

Although the Department has previously studied food-infection outbreaks in which the staff definitely felt that the causative organism was Clostridium perfringens, this is the first time in Iowa that laboratory findings have been obtained to support the contention. Ordinarily, food-infection or intoxication investigations are reported late, and by the time health workers can establish communication, the patients usually have recovered and the offending food has been destroyed. Illnesses in this outbreak were reported promptly, and the investigation was actually underway within a few hours after the first patients reported to their doctors.

Morbidity Report for Month of December 1965

Diseases	1965 Dec.	1965 Nov.	1964 Dec.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	400	386	372	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	122	98	61	Buena Vista, Dubuque, Hamilton, Scott
Whooping cough	0	1	4	
Brucellosis	10	4	15	Scott
Chickenpox	995	508	748	Dubuque, Hamilton, Polk, Scott, Wright
Meningococcal meningitis	2	0	1	Poweshiek, Scott
Mumps	266	143	258	Bremer, Kossuth, Polk, Pottawattamie, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	31	25	91	Black Hawk, Polk
Rabies in animals	12	11	14	Keokuk
Malaria	0	0	0	
Psittacosis	0	0	1	
Q fever	0	0	1	
Tuberculosis	30	31	33	For the State
Syphilis	66	71	60	For the State
Gonorrhea	311	226	157	For the State
Histoplasmosis	3	0	183	Fayette, Scott
Food intoxication	200	0	0	Woodbury
Meningitis (type unspec)	0	1	1	
Diphtheria carrier	0	0	0	
Aseptic meningitis	3	2	0	Humboldt, Linn, Scott
Salmonellosis	10	8	1	Linn, Polk
Tetanus	0	0	0	
Cancroid	1	0	0	Polk
Encephalitis (type unspec)	0	0	0	
H. influenzal meningitis	0	1	0	
Amebiasis	2	0	2	Boone
Shigellosis	4	1	0	Black Hawk
Influenza	0	0	13	

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especially in elderly or debilitated patients

and in diabetics — patients with a history of fungal overgrowth — patients on steroids who require antibiotics. The antimonilial specificity of Nystatin plus the extra benefits of DECLOMYCIN Demethylchlortetracycline allow lower mg intake per dose per day, the option of b.i.d. dosage, higher activity levels, 1-2 days' "extra" activity.

Side Effects typical of tetracyclines include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation) and increased intracranial pressure (in young infants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial or natural sunlight (even from short exposure and at low dosage), patient should be warned to avoid direct exposure. Stop drug immediately at the first sign of adverse reaction. It should not be taken with high calcium drugs or food; and should not be taken less than one hour before, or two hours after meals.

Average Adult Daily Dosage: four divided doses of 1 capsule each or two divided doses of 2 capsules.

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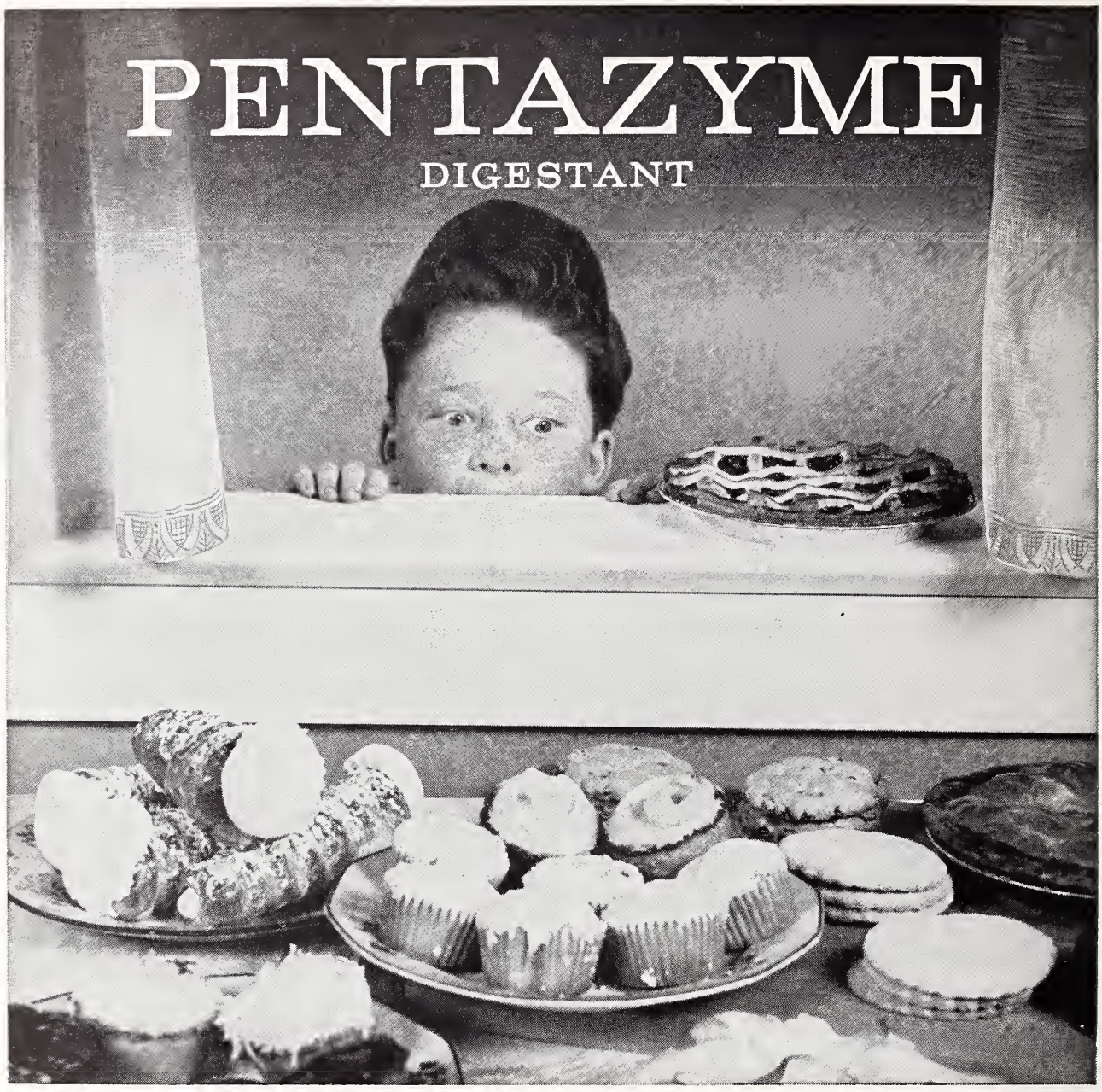

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Planning Ahead

This is the month when we all start longing for spring—spurred on by the daily receipt of garden magazines and catalogues in our mailboxes. Every grocery store has sprouted little pots of flowers and greenery, and those delightful displays of flower seeds are almost more than we can pass by. Yes, this is the season when we start to plan ahead! Spring is nearly here!

Of course there are a few chores we must tend to before we can really succumb to the joys of setting out new plants—we must rake out the old leaves, tidy up the accumulation of winter. This is true, too, of the Auxiliary. Our Auxiliary garden must be well tended—must have the old leaves raked carefully away and the winter accumulation of minutiae tidied. May I give you a checklist to follow?

1. Carefully rake out the old leaves of your files. This is the best season to go through your files to ready them for your successor. Save only the things which in your opinion will be helpful to the next one in line. A bulging file, filled with outdated material of no current value, is really a deterrent to your successor. She may be so overwhelmed by the bulk of material to be covered that she will not get the "meat" of the job she is expected to do.

2. Save the perennials—projects which your Auxiliary has used in the past in community service, in money-raising ideas, in honoring your doctors. As you rake through your files, save the pictures and clippings that best tell the story of your accomplishments. We want to know what you are doing!

3. Tidy up the winter accumulation of misinformation about the legislation concerning medicine. Talk to your husband about ways you can help in informing the lay public concerning the medical problems that are so carelessly bandied about today. Inform yourselves, and then talk! Talk to neighbors, to friends, to the people you meet in your everyday contacts. Your husband will appreciate the time you take to inform the public. He would like to perform this essential function of education, but he doesn't have the time! He's too busy taking care of the sick.

4. Plant new seeds of inspiration by coming to the Auxiliary convention in April. Many interesting and enlightening things are being planned again this year.

5. Enjoy yourself—watch your garden grow! You've accomplished all the tiny, annoying things that must be done. Now you can rest on your laurels for a little while, and simply enjoy the spring. But be sure to enjoy it at the convention in Des Moines.

Your Editor

Winter Blunderland

Winter Blunderland, and how to avoid dangerous and costly winter driving blunders: Be clear-sighted. Take a few extra minutes to clear the entire windshield before starting off. Clean side and back windows, too. A snow brush with a plastic scraper on one end makes the job easier. Carry rags for lights and mirror.

Lemon or onion on your windshield? Save the groceries for better use. . . . They only make a mess on the glass. So do glycerin and beeswax. Commercial spray de-icers work well, but be sure to wipe your windshield dry after using them or hard-to-remove streaks may remain.

If your windshield wipers smear, they need adjustment or blade replacement. If your car has windshield washers, keep the reservoir filled with the recommended solution—not plain water.

Never drive with parking lights instead of headlights in winter's early dusk and poor visibility. Parking lights can cause an on-coming driver to think you are farther away than you are. Keep headlights clean; dirty ones can greatly reduce your own seeing distance at night.

Be a self-starter. Don't end up calling a tow truck because of these blunders. Keep your tires at recommended pressure. Letting air out of today's low-pressured tires doesn't help; it increases wear. About the only thing that will safely increase traction is to use snow tires or chains.

It's a good idea to carry sharp sand just in case you do get stuck, but added weight in your trunk will only make steering tricky and make big skids out of little ones. Traction is increased so little that it's not worth the risk.

If you have a standard transmission, start in second gear. Doing so gives you less force at the wheels, and less spin.

Start gently . . . very gently. Let your tires bite. Spinning only melts the ice, lets you make things slicker and digs you in deeper. Keep your wheels pointed straight ahead, and if you must turn, give the wheels a few turns back and forth to open a path in the snow.

Keep going. When approaching a hill, get up enough momentum to reach the top. Slow down at the crest, and watch out for stalled cars or obstacles on the down grade.

Learn the temperature traps. Ice and snow last longer in shaded areas, beneath overpasses and on bridges. Be extra careful in such places.

Posted speed limits are for ideal conditions. In winter, half the posted limit may be too fast. The real speed limit is your good judgment.

Stop safely. Pump your brakes when you see that you have to stop or slow down—don't jam them on! Slamming on the brakes may cause you to lose control. To pump brakes properly, press and release the brake rapidly once or twice a second. Pumping action lets wheels roll for steering control, and helps prevent skids.

Beware of "warm" or "wet" ice. Ice and snow are twice as slippery at 30 degrees as they are at zero degrees. So be on guard when the temperature is just about freezing.

Be careful when approaching intersections. Heavy traffic at corners packs down snow. Spinning wheels polish the ice and make stopping a treacherous business. Start to slow down ahead of the intersection, and don't blunder into a needless accident.—Reprinted from the February, 1965, AUXILIARY NEWS.

Teenage Twisting and Baby Bouncing Related

By BARBARA J. ELLISON

(Taken from South Carolina Auxiliary News)

Twisting, the Watusi dance, and other such "refinements" of rock 'n' roll may be music to some people's ears and discord to others. To those who have shaken and shuddered during rocking and rolling or twisting and wondered how this brand of music ever evolved in the first place, we should like to advance this theory.

Has as it ever occurred to you that hardly before the innocent newborn babe has a chance to bat his baby blue eyes, he has been thrust into one of the latest conveniences for mother and/or nurse —a rocking contour chair?

Bouncing baby is right!

Catching the fresh air he is pushed and rocked in the time-honored baby carriage. (We're not even mentioning the rock-a-byeing in the cradle or the rocking chair.) If a baby gives a little squawk, the carriage is hastily given a few extra bounces and rolls. When you stop to think, before junior has reached the age of 36 months, he has been joggled, jostled, jarred, jounced, shaken, shuffled, bounced, buffeted, patted, vibrated, swung, etc.

Whoever launched the expression "bouncing baby" knew exactly what he was saying. For as the baby's head perches more firmly on his shoulders, he is then bounced on any available knee of any available relative or friend. And when no such vehicle is available, he is left to bounce in any of the variety of jumping seats or self-propelled swings that are on the market.

There are also canvas swings to allow the baby to spend his waking hours swinging to and fro. It seems when the new master of the house isn't being bounced up and down, he is swaying to and fro. And then even before the baby has graduated from the carseat, he has been saddled up on a rocking horse to bounce some more.

If this sample is not enough to reveal the roots of the rock 'n' roll pattern, let us follow our youngsters just a bit further through life. Waiting for the unsuspecting toddler are the backyard gymnasiums, with swings and sliding boards. There are also an infinite variety of the trampoline for our little jumping jacks, for it is one of the latest contraptions flooding the juvenile's and children's market.

To add to this there are the pogo sticks for vertical bouncing, teetertotters for vertical and horizontal bumping, and merry-go-rounds for those interested in circular oscillation.

All this can be, and undoubtedly is, a great deal of fun. Viewing the background of the phenomenon, can we wonder that the baby who starts life rocking and reeling develops into a teenager who finds diversion in rock 'n' roll!

When young people start acting like bucking broncos, chances are that we have only ourselves to blame for initially launching these rocking kids into orbit.

So let us just resign ourselves to the knowledge that our teenagers seem to come by this phase quite honestly.

The Forgotten Taxpayer

My dear Internal Revenue:
You've never happened to review
My tax return for any year
Since first I started living here.
I'm just as glad, I must confess,
But this has caused my wife distress.
When wives of neighbors all complain,
My spouse in silence must remain
Because you haven't checked her mate.
Therefore, could you investigate
So she will think I am once more
Successful as the man next door?

—LOYD ROSENFIELD

News From Around the Hawkeye State

Black Hawk County

The Black Hawk County Medical Auxiliary will have its annual ball February 19. It will be held at the Holiday Inn, with Charlie Trussell and his orchestra providing music for dancing. Theme for the dance is "Coronation Ball." It will have a Mardi Gras flavor, and the persons attending may wear costumes. Dr. Don Woodard will serve as emcee.

The purpose of the dance is to raise funds for the four hospitals in the area, Allen Memorial, Schoitz Memorial, St. Francis, all in Waterloo, and Sartori, in Cedar Falls. Mrs. Robert Miller is ticket chairman. Tickets may be purchased from her, or from any other Auxiliary member.

A king and queen will be crowned at the dance. They are to be selected by a committee on the basis of the nominees' civic contributions.

The "Medicats" will play from 8 to 9 p.m.

General chairman is Mrs. Edward Sitz, Mrs. Vernon Plager is program chairman, and Mrs. Dwight Conklin is decorations chairman.

Cerro Gordo County

The Cerro Gordo Medical Auxiliary board met on December 9 at the home of Mrs. C. O. Adams, in Mason City. Plans were made for a meeting December 16, to which the Future Nurses Clubs from Newman High School and Mason City High School were invited. That was an evening party at the home of Mrs. Edwin Kennedy.

Polk County

The following is a report of the activities of the Woman's Auxiliary to the Polk County Medical Society from May through December 31, 1965.

The membership roll was as follows:

Number of members	251
Members lost by death	1
Members lost by moving or otherwise	8

Four board meetings and three regular meetings have been held.

The principal activities since May, 1965, have been as follows:

Practical Nurses' Tea: On August 19, 1965, a reception for the 1965 graduating class of the Practical Nurses School was held at Slinker School. Approximately 200 nurses and guests were served.

Joint Meeting with the Polk County Medical Society: The fall season was opened with a joint meeting between the Medical Society and the Auxiliary at the Des Moines Golf and Country Club on September 15, 1965. The social hour and dinner were followed by a speech presented by Dr. Carl S. Winter of Oak Forest, Illinois. His subject was "People Are Fun."

October Auxiliary Meeting: Our meeting was held at Salisbury House, and started with a tour of the building. Following the tour Miss Hannah Nollen gave a delightful account, "Reminiscences of Old Des Moines Highlights." A tea completed the afternoon activities.

Homebound Handcraft Sale: Our annual sale for the Iowa Society for Crippled Children and Adults, Inc. was held in Younkers' foyer from October 4 through October 9, 1965. Total receipts for the week were $817.68.

Mississippi Valley Conference on Tuberculosis: At the request of the County Medical Society, the Auxiliary served coffee and doughnuts to 125 persons attending the Mississippi Valley Conference on Tuberculosis and Thoracic Surgery, at the Savery Hotel on October 15.

Health Careers Day: The Auxiliary held Health Careers Day for the central area at Veterans Administration Hospital on October 22. Approximately 70 students attended the all-day session. Seven schools in Polk County were represented, as well as schools from Blairsburg, Indianola, Fort Dodge, Kamrar, Osceola, Oskaloosa and Williams. This program was well received by the students, and they were oriented to the wide range of occupations available in medicine and allied fields.

November Auxiliary Meeting: The November luncheon was held at the Hyperion Field Club. Mr. Richard W. Carey, trust officer for estate planning at the Iowa-Des Moines National Bank, spoke on "What You Should Know About Your Husband's Affairs." His talk was most informative, and a lively question and answer session followed.

Christmas Card Project: The proceeds of our recent Christmas Card Project, $1,204.62 will be equally distributed among the American Medical Association's Education and Research Foundation, The Iowa Medical Foundation's student loan fund and a local project to provide a scholarship for a medical student at the State University of Iowa College of Medicine.

Interspersed between regular Auxiliary meetings, the president and president-elect have been busy attending many meetings of the Des Moines Council of Social Agencies and its Case Worker Division. Primarily, these have dealt with the new Social Security amendments, especially Medicare, with the Poverty Act, with School Dropouts, etc. We are fast becoming aware of the increasing role of the federal government in our local community.

—MRS. PAUL FROM

The Polk County Medical Auxiliary enjoyed a luncheon in the Colonial Room at the Des Moines Club on January 14, 1966. Following a short business meeting, Mrs. Elizabeth Parker, executive director of Community Blood Bank of Central Iowa, gave a very interesting talk on the organization

and present functions of the blood bank. It was very informative and challenging.

Getting Acquainted With . . .

Mrs. Robert E. Murphy
Lee County (North) President

Mrs. Robert E. Murphy, the second child of Mr. and Mrs. William L. R. Menges, was born in St. Louis, Missouri, and given the name Agnes Marie. She wasn't called by that name very long, however. At the ripe age of one, she had already become quite a tom-boy and was tagged with the name "Jimmie." She has been known thus, ever since.

Jimmie attended primary and secondary schools and Fontbonne College in St. Louis. During World War II she joined the SPARS (Coast Guard Women's Reserve), and was assigned to recruitment and public relations duties at the Coast Guard's 9th Naval District Headquarters, in St. Louis.

While in the service, Jimmie met and married Robert E. Murphy who then was attending St. Louis University School of Medicine. After her husband's graduation from Medical School, she, her husband, and a wee little daughter, Michele, moved to Dallas, where Dr. Murphy completed internship and 1½ years of an Ob.-Gyn. residency. During that time they had a second baby girl, Kathleen. When Dr. Murphy was recalled into military service the family moved to Wurzburg, Germany, for a tour of duty. With military service behind them, they moved to Detroit, where Dr. Murphy completed the remaining 2½ years of his Ob.-Gyn. residency. While in Detroit the Murphys became the parents of their third daughter, Joan. Next, and perhaps finally, they moved to Fort Madison, Iowa.

Along with her family, Jimmie engages in activities such as horseback riding, swimming, dancing, fishing, etc. She enjoys membership in school, church and community organizations. However, she likes to belong only to enough organizations so that she can be an active member and not a member in name only.

This brings us more or less to the present, and almost to the end of a satisfying term of office for Mrs. Robert E. Murphy as president of Lee County (North) Woman's Auxiliary.

Flash!!

MARCH 15—Essays due at State Society office
MARCH 30—Doctor's Day
APRIL 15—Names of Volunteer Health Service Award winners due at State Society office.

District Meetings

The Third Councilor District of the Iowa Medical Auxiliary held a luncheon meeting on November 5, 1965, at Sioux Center. The hostesses were the members of the Sioux County Medical Auxiliary, with Mrs. Alex Bushmer, of Orange City, presiding. Greetings from the State Auxiliary were extended by Mrs. Henry Boe, the State Auxiliary president, from Sioux City.

Mrs. C. O. Adams, Mason City, discussed the Health Careers program. Mrs. S. M. Korson, Independence, president elect, pointed up the importance of individual and county activity in relationship to the state as a whole. Mrs. R. E. Hines. Des Moines, first vice-president, reviewed the work done by the AMA/ERF, and displayed articles that can be purchased to promote the activities of that organization. Mrs. B. M. Merkel, also from Des Moines, state treasurer, discussed the state and national publications which are sent to all Auxiliary members. Mrs. Hazel T. Lammey, the administrative secretary, issued an invitation to visit the state offices, and offered help with any problems that may develop within a county group.

Mrs. M. O. Larson, Hawarden, Sioux County president asked all to plan to attend the April 25-26 meeting. All members felt the meeting to be most interesting and enlightening, and appreciated the opportunity to become better acquainted with the state officers.

If you move or have a change of address, please fill this out.

Send it to: Mrs. Hazel T. Lammey, 529-36th Street, Des Moines, Iowa 50312.

Mrs. .....
Last Name — Husband's First Name & Middle Initial

.....
Street Address

.....
City — County — State — Zip Code

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Henry Boe, 3919 Orchard Street, Sioux City 51104

President-Elect—Mrs. S. M. Korson, Box 111, Independence 50644

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Corresponding Secretary—Mrs. H. C. Leiter, 2400 E. Solway, Sioux City 51104

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228

Co-Editor—Mrs. R. R. Carlson, 826 Sherman Drive, Ankeny 50021

Personals

At the Sioux City Country Club, on December 16, **Dr. H. E. Rudersdorf** became president of the Woodbury County Medical Society, and the following officers were chosen for 1966: **Dr. C. M. Marriott**, president-elect; **Dr. C. A. Johnson**, vice-president; **Dr. C. T. Helseth**, treasurer; and **Drs. D. E. Howard** and **C. A. Brown**, trustees.

Dr. Harold W. Morgan, a Mason City radiologist, has been given one of 35 award certificates for best original articles by physicians, in a 1965 MEDICAL ECONOMICS contest.

Dr. George H. Scanlon, an Iowa City surgeon, is to serve on the hospital ship *Hope* at Corinte, on the west coast of Nicaragua, next fall. He will join the *Hope* staff on September 13 and stay until November 15. **Mrs. Scanlon** is to accompany him.

The contract between the Scott County Medical Society and the county supervisors, under which the Society has been paid $9.25 per family for the medical care of indigents, was terminated on January 1, and physicians are to submit individual statements for such work. Though expenditures by the County for those people will increase markedly for a six-month period, **Dr. Willard Pheteplace**, of Davenport, president of the Society, explained to the supervisors that it will drop again on July 1, when the Medicare program takes effect, since the majority of such patients are over 65 years of age.

Dr. Meredith M. Saunders, who has practiced ophthalmology in Des Moines since September, 1964, has been appointed consultant ophthalmologist to the State Department of Social Welfare, effective January 1.

Dr. John Hege, now superintendent of the mental hospital at the Men's Reformatory in Anamosa, has been appointed by the State Board of Control to head the new security hospital that is to be built on a 55-acre tract just north of the Highway Commission's garage at Oakdale. Principally, it will provide care and treatment for mentally-ill prisoners and for dangerous patients transferred from the state mental health institutes, and will have a capacity of 150, but Dr. Hege has said it will also provide outpatient services to patients who can't be provided care elsewhere. Completion is scheduled for 1968.

Dr. F. E. Flannery, Cedar Rapids, is the new president of the medical staff at Mercy Hospital, Cedar Rapids, and the other officers for 1966 are

a Private Psychiatric Center at Jacksonville, Illinois, *since 1901*

Complete psychiatric treatment in an environment for cure. A 50 bed hospital with the most modern diagnostic and therapeutic equipment for the treatment of nervous and mental disorders.

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MEMBER: Illinois Medical Service (Blue Cross-Blue Shield).

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long established as the broad-spectrum agent of first choice in a wide variety of infections

* WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT
triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline

* ESPECIALLY VALUABLE IN U.R.I.
provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered

* NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY
Signemycin 375—high-potency capsules for simpler administration, greater patient economy

YCIN® 375

(tetracycline 250 mg. triacetyloleandomycin 125 mg.)

Indications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug.

Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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Dr. Jerald Greenblatt, Cedar Rapids, president-elect; **Dr. Curtis Wuest**, Amana, vice-president; and **Dr. P. J. Bates**, Cedar Rapids, secretary-treasurer.

The fourth and last in a series of discussion programs presented by the Linn County Medical Society over station KCRG-TV, Cedar Rapids, was shown on December 20. The topic was "New Horizons in Medicine," the moderator was **Dr. John E. Walker**, and the panelists included **Drs. John Koch, Eugene L. Grandon** and **Dean Bemus.**

Dr. A. J. Herlitzka, of Mason City, discussed heart disease and advances in heart surgery at a meeting of the Hancock County Hospital Auxiliary on December 17.

At the December 14 meeting of the Mahaska County Medical Society, in Oskaloosa, **Dr. William McCormack**, of Ames, discussed respiratory distress in the newborn, and demonstrated the apparatus that he and two ISU engineers have designed for the relief of such difficulties. It is being manufactured by an Ames firm.

Dr. M. F. Kiesau moved into his new office building in Postville on December 15.

At a meeting of the medical staff of Sheldon Community Memorial Hospital, on December 13, the following officers were elected for the ensuing year: **Dr. Robert E. Griffin**, Sheldon, president; **Dr. Cornelius Maris**, Sanborn, vice-president; and **Dr. Lloyd J. Sweeney**, Sanborn, secretary.

The following physicians have recently been elected to membership in the Iowa Chapter of the American Academy of General Practice: **Dr. Harold C. Rankin**, of Mt. Pleasant; **Dr. John P. Jacobs**, of Cedar Rapids; **Dr. Robert R. McClung** and **Dr. Earl J. McKeever**, of Knoxville; **Dr. Jack L. Ganzhorn**, of Mapleton; **Dr. Leland Krueger**, of Casey; **Dr. Terry F. Dynes**, of Decorah; **Dr. James L. Flood**, of Denison; **Dr. George D. Aurand**, of Clinton; **Dr. Thomas D. Gartin**, of Ames; **Dr. Lawrence V. Larsen**, of Harlan; **Dr. Thomas Lopez**, of Farmington; **Dr. Bill R. Withers**, of Waukon; **Dr. Thomas A. Bairnson**, of Cedar Falls; **Dr. James R. Bell**, of Des Moines; and **Dr. Bruce V. Anderson**, of Greene.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, has been appointed for a second time to the board of regents of the National Library of Medicine, Bethesda, Maryland. He received his first four-year appointment in 1958, and only one other person has ever received a second one.

Dr. William R. Marsh opened a general practice at Avoca during December. He took his M.D. degree at the University of Nebraska, interned at Bishop Clarkson Hospital, Omaha, and has been in general practice in West Omaha. He and Mrs. Marsh have a college-student daughter and three preschool children.

Dr. C. E. Schrock, of Iowa City, has been reelected president of the medical staff at Mercy Hospital there. The other physicians elected to its executive committee are **Dr. W. B. Gelman, Dr. J. S. Greenleaf, Dr. K. J. Judiesch, Dr. L. A. Luhman** and **Dr. G. H. Scanlon.**

On December 21, **Dr. Charles R. Fesenmeyer** was reelected president of the medical staff at St. Luke's Hospital, Davenport. **Dr. Erling Larson, Jr.** was named vice-president, and **Dr. Robert J. Byrum** was reelected secretary-treasurer.

Dr. Alan R. Swearingen has joined **Dr. Warne Ramsey** in practice at Bettendorf. Dr. Swearingen is a graduate of the U. of I. College of Medicine, he interned at Marion County General Hospital, Indianapolis, and for the past two years he has been at the Webb Air Force Base, Big Spring, Texas. He and his wife have two sons, five and two years of age.

At a meeting of the Carroll Rotary Club on December 20, **Dr. Walter A. Anneberg** showed films that he had taken during his visit to Hawaii last spring, and also the film of a disaster drill conducted at St. Anthony Hospital, Carroll.

Dr. Louis E. Bees was given a plaque, on December 15, by American Legion Post No. 104, at Bennett, for his more than 40 years of service to that community.

Bids were opened early in December on a new 34-bed hospital to be constructed in Eldora. The project will take 15 months to complete, and may be started this winter.

By a 77 per cent "yes" vote on December 14, approval was given for a bond issue of $845,000

for the construction of an 80-bed addition to the Boone County Hospital, in Boone.

Dr. R. J. Johnson, of Iowa Falls, was a patient at University Hospitals, Iowa City, for about 10 days during November.

Dr. Harry Harper, Sr., has been elected chief of staff at Sacred Heart Hospital, Fort Madison. **Dr. Frank Richmond, Jr.**, is vice-chief, and **Dr. John McGee**, secretary-treasurer.

The new officers at Mercy Hospital, Marshalltown, are **Dr. D. S. Reading**, president; **Dr. W. W. Southwick**, vice-president; and **Dr. D. J. Sullivan**, secretary-treasurer.

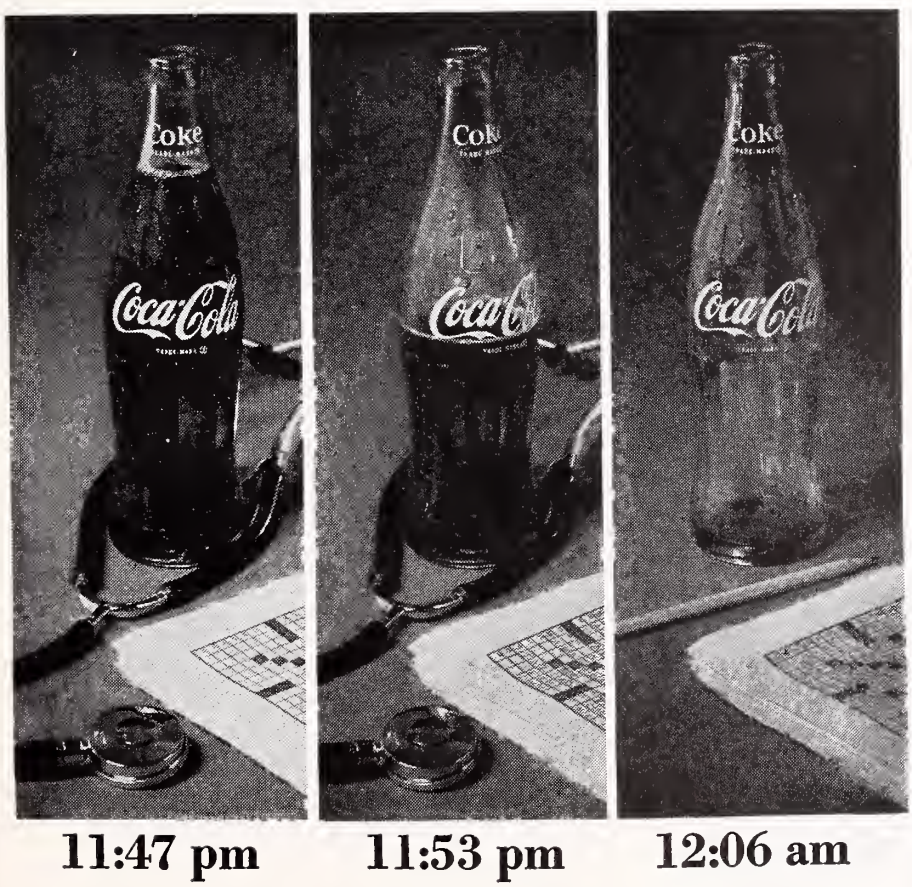
At the December 15 meeting of the Lee County Medical Society, at St. Joseph's Hospital, Keokuk, **Dr. Gene Hoerr**, of the Medical and Surgical Clinic, Peoria, discussed the management of diabetics.

The officers of the medical staff at Mercy Hospital, Davenport, were all reelected on December 14. They are **Dr. J. L. Kehoe**, president; **Dr. G. E. Morrissey**, vice-president; and **Dr. R. J. Foley**, secretary-treasurer.

Dr. George Malouf, formerly of Dark Harbor, Maine, has started a medical practice in Marcus.

At a meeting of physicians and executives of Friendship Haven, in Fort Dodge, on December 9, to discuss the establishment of a medical staff at the institution's health center, **Dr. Elmer M. Smith**, director of medical service for the State Board of Social Welfare, said that only five of Iowa's 478 nursing homes had met federal accreditation requirements. Friendship Haven was one of those five. Subsequently, when the medical staff had been formed, **Dr. Donald E. Tyler** was chosen as its president, **Dr. Dan S. Egbert** as its vice-president, and **Dr. Roger E. Drown** as its secretary, by members of the Webster County Medical Society.

Dr. John M. Graether, a Marshalltown ophthalmic surgeon, discussed vision problems on Decem-



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ber 8 at a meeting of the Marshall County Preschool Child Study Group.

On December 9, **Dr. R. E. Woodard** was reelected president of the medical staff of St. Joseph Mercy Hospital, Fort Dodge. **Dr. Dan S. Egbert** was named vice-president, **Dr. Jerry W. Lawson**, secretary, and **Dr. D. E. Tyler**, member at large of the executive committee. The guest speaker at the meeting, **Mr. Paul Donnelly**, director of hospital administration at St. Louis University, discussed doctor-hospital relations.

Dr. Walter Block, a pediatrician, is to have charge of a children's clinic in Cedar Rapids that will concentrate on emotional problems and will work closely with the Child Development Clinic at the U. of I. College of Medicine. Toward the clinic's $10,898 first-year budget, Cedar Rapids Jaycee Charities and the Linn County Medical Society have each donated $3,000, and there have been some gifts from individuals. Besides Dr. Block, the staff will consist of a clinical phychologist, a social worker, and a speech and hearing therapist. At the start, its work will be confined to diagnosis, but later it is hoped that treatment can be given there, and that it can provide training for internes from the Cedar Rapids hospitals, and for social workers.

Dr. Donald T. Stroy became chief of staff at Jennie Edmundson Hospital, Council Bluffs, on January 1, succeeding **Dr. Donald V. Hirst.** The new officers chosen at a meeting on December 7 are **Dr. M. P. Margules**, president-elect; **Dr. Elmer O. Bean**, secretary; and **Dr. Herman Rassekh**, audit-control officer.

Dr. Harry W. Dahl, formerly the radiologist at Iowa Lutheran Hospital and now admitting officer at the Veterans Administration Hospital in Des Moines, was presented the Des Moines Sertoma Club's 1965-1966 Service to Mankind Award on December 22. The citation mentioned "his wide range of community activities." He has been a member and president of the Des Moines Board of Education, medical officer of the Iowa National Guard, and president of the East Des Moines Kiwanis Club.

At a meeting with the Pottawattamie County Board of Supervisors on December 6, **Drs. James Mahoney** and **D. H. Rassekh**, Council Bluffs psychiatrists, and **Dr. Paul Huston**, director of the State Psychopathic Hospital, Iowa City, recommended the establishment of a three-man committee to screen patients who might otherwise be sent to the State Mental Health Institute at Clarinda. The committee would consist of a social worker, a representative of the County Welfare Department and one or another of the psychiatrists in private practice, serving in rotation. The initial proposal was for a trial period of three months.

Pottawattamie County currently spends $300,000 per year for the care of its patients at Clarinda, and Dr. Huston said that the cost per patient at a state institution is about 2½ times greater than in a private institution. "If you gave me the chance to screen everyone committed to a state institution," he declared, "I believe I could keep half of them out." Speaking later at a public meeting in Mercy Hospital, Council Bluffs, Dr. Huston said patients with mental disorders should not be sent away from their home communities and families, and should be treated in general hospitals whenever possible.

Dr. Gene E. Michel, chief of staff at Loring Hospital, Sac City, has announced that the five doctors in Sac County have pledged $42,500 toward the institution's building fund, or 11.5 per cent of the needed $375,000.

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lungs

Dr. Sidney E. Ziffren, professor of surgery at the U. of I. College of Medicine, reported recently on a year's experience with silver nitrate in the treatment of burns, calling it "a splendid form of therapy." Dressings soaked in 0.5 per cent silver nitrate provided excellent protection against infections for 60 patients, he said.

Mr. Edwin M. Kingery, of Des Moines, executive secretary of the Polk County Medical Society, has been appointed to the Sears Roebuck Foundation Medical Advisory Board for 1966, as the representative of the Medical Society Executives' Association. The Foundation's activities include fund-raising for the construction of doctors' buildings in doctorless towns, physician placement and a preceptorship program.

Dr. Edward M. Honke was elected president of the medical staff of St. Vincent's Hospital, Sioux City, on December 28, succeeding **Dr. J. P. Tiedeman.** The other officers who were chosen are **Dr. R. C. Mugan,** vice-president; **Dr. W. S. Thoman,** secretary-treasurer; and **Drs. H. N. Hirsch** and **F. J. Lohr,** executive committee members-at-large.

The medical staff at Mercy Hospital, Burlington, selected **Dr. J. J. McElwain** as its new president, on December 20. **Dr. J. P. Stoikovic** was elected vice-president; **Dr. W. E. Calderon,** secretary-treasurer; and **Drs. J. J. Kivlahan, Wayne Lee** and **T. T. Mazur,** members of the executive committee.

Dr. Milo Jeffries has been named president of the medical staff at Evangelical Hospital, Marshalltown, succeeding **Dr. Harold Sauer.** The other officers named at a recent meeting are **Dr. Henry Kosieradzki,** vice-president, and **Dr. E. L. Jacobs,** secretary-treasurer.

Dr. Reuben B. Widmer, of Winfield, was elected chief of staff of the Henry County Memorial Hospital, at a recent meeting, and **Dr. Harold C. Rankin,** of Mt. Pleasant, was named secretary. Officers are elected for two-year periods.

Dr. and Mrs. Richard W. Hammer and their two sons left Des Moines on December 30 for Boston, where Dr. Hammer has accepted a one-year fellowship in the Adolescents' Unit at Children's

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Hospital, a part of Harvard Medical School. In 1967, when he returns, he plans to begin a pediatric residency at Raymond Blank Memorial Hospital, Des Moines.

Dr. Hugo A. Lindholm, of Estherville, has been elected to full fellowship in the International College of Surgeons. The induction ceremony will be held at Houston next spring.

Dr. Oscar C. Beasley, a private practitioner of internal medicine in Iowa City, has been elected to membership in the American College of Physicians. His membership will be conferred at the organization's 47th annual meeting in New York City next April.

Dr. Earl Parsons is to share responsibility with **Dr. W. M. Crawford** for the operation of the Lee County Mental Health Center in Keokuk and Fort Madison. Both men have private psychiatric practices in Burlington, and Dr. Parsons is psychiatric consultant at the State Penitentiary in Fort Madison.

Dr. Richard L. Waste is to erect a medical building opposite the Delaware County Memorial Hospital, in Manchester.

The new officers of the medical staff at St. Joseph Mercy Hospital, Cresco, are **Dr. H. E. Bergee,** president, **Dr. P. A. Nierling,** vice-president, and **Dr. R. G. Boeke,** secretary.

On December 31, **Dr. M. S. Mark** reported to Des Moines police that someone had stolen $310 in cash and an even larger sum in checks from a file drawer in his office during the preceding night.

Dr. Joseph A. Rapagnani announced that he would close his practice at Indianola on January 20 to join a medical group in his home town, Keokuk. He is a graduate of the Stritch School of Medicine, Chicago, he interned at Mercy Hospital, Des Moines, and he has practiced in Indianola since September, 1961.

The DES MOINES SUNDAY REGISTER for January 2 contained a feature story on the "Future Doctors Club" of Roosevelt High School, Des Moines, many members of which are employed nine hours per week at 75¢ per hour, during the school year, at various tasks in Iowa Methodist Hospital. The 43

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members include several girls who are more interested in nursing than in medical careers. The plan is in its third year. **Dr. Parker K. Hughes,** an obstetrician and gynecologist who currently is president of the Polk County Medical Society, helped to get the program started and is credited with taking a daily interest in it. Other Des Moines physicians have addressed the group's monthly meetings.

Mr. Eldon Huston has been promoted to assistant executive vice-president, on the staff of the Iowa Medical Society, and **Mr. Donald Neumann** has been promoted to assistant to the executive vice-president.

Dr. Edward E. Mason, a professor of surgery at the U. of I. College of Medicine, has received a one-year research grant of $19,224 from the USPHS to finance a study of cellular-enzyme loss in general surgery.

Dr. Richard M. Caplan, an associate professor of dermatology at the U. of I. College of Medicine, was the pianist accompanying a woodwind quintet that entertained at the opening of an art show by faculty members not belonging to the Schools of Fine Arts and Music, in Iowa City on January 17. Dr. Caplan took an M.A. in music at the U. of I. before starting the study of medicine there.

Dr. Maurice M. Wicklund, of Waterloo, has become president of the Black Hawk County Medical Society. **Dr. Frederic G. Loomis,** of Waterloo, has been chosen president-elect; **Dr. Don Penly,** of Cedar Falls, is the new vice-president; **Dr. George W. Heine,** of Cedar Falls, is the secretary; and **Dr. Richard D. Wells,** of Waterloo, is the treasurer.

The feature "These Amazing Iowans" in the DES MOINES SUNDAY REGISTER for January 9 was devoted to **Dr. John P. Cogley,** of Council Bluffs.

Dr. Josef R. Martin was elected president of the Carroll County Medical Society at a dinner meeting held at the Burke Motor Inn, in Carroll, on December 1. He succeeds **Dr. Eleanor Roverud. Dr. Robert Q. Christensen** was elected vice-president, and **Dr. Allen D. Anneberg** was reelected secretary-treasurer.

At the December 14 meeting of the Cerro Gordo County Medical Society, **Dr. J. Stephen Westly**

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was elected president of the organization; **Dr. John Baker,** vice-president. **Dr. Paul Potter,** treasurer; and **Dr. Warren Wulfekuhler,** secretary. The doctors who were chosen as delegates are **Dr. L. C. Orton, Dr. Walter N. Hanson** and **Dr. L. J. Kirkham,** and as alternates **Dr. Edwin D. Kennedy, Dr. G. Travis Westly** and **Dr. Alfred J. Herlitzka.** All of them practice in Mason City.

The guest speaker, **Dr. Robert T. Soper,** associate professor of surgery at the U. of I. College of Medicine, discussed bowel obstruction in the newborn.

Dr. D. W. Todd, of Guthrie Center, was elected president of the Dallas-Guthrie County Medical Society at a meeting held in the Pattee Hotel, at Perry, during the last week in November.

The Lee County Medical Society voted in December to donate a second $1,000 to the Iowa Medical Foundation's student loan fund. The officers elected for the new year include **Dr. Miles Archibald,** of Fort Madison, president; **Dr. Benjamin VanWerden,** Keokuk, vice-president; and **Dr. Sebastian Amberry,** Keokuk, secretary-treasurer.

Dr. Russell Watt was elected president of the Marshall County Medical Society at the group's December 7 meeting. He succeeds **Dr. Rufus Kruse. Dr. Arthur Cloud** was made vice-president; **Dr. Robert German,** secretary-treasurer; **Drs. Lawrence O. Goodman** and **Ray G. Robinson,** delegates; and **Drs. Donald Reading** and **Harold Sauer,** alternates. Except for Dr. Robinson, who is in State Center, all of those men practice in Marshalltown.

The Page County Medical Society held its annual meeting and election of officers at Berning's, in Shenandoah, on December 16. **Dr. Frederick S. Sperry,** of Clarinda, was chosen as president; **Dr. Kenneth Gee,** of Shenandoah, as vice-president; **Dr. Kenneth Jensen,** of Clarinda, as secretary-treasurer; and **Dr. George Powers,** of Shenandoah, as program chairman.

At the December 21 meeting of the Pottawattamie County Medical Society, held in Hotel Chieftain, Council Bluffs, **Dr. Frederick Marsh, Jr.** succeeded **Dr. Harold Trafton** as its president. **Dr. Emmett Mathiasen** was chosen as president-elect; **Dr. Max Olsen,** as vice-president; and **Dr. Max Kinney,** as secretary-treasurer. The speaker of the evening was **County Attorney Frederick J. Kraschel.**

Dr. Roger E. Drown became president of the Webster County Medical Society at a dinner meeting held at the Fort Dodge Country Club on December 15. In the annual election, **Dr. J. J. Weyer** was chosen as president-elect; **Dr. T. J. Michelfelder,** vice-president; and **Dr. J. E. Reed,** secretary-treasurer. The delegates are to be **Dr. Dan S. Egbert, Dr. John F. Kelly, Dr. Herbert H. Kersten** and **Dr. L. J. O'Brien. Dr. Arthur Echternacht** is the immediate past-president.

Dr. Dale Liechty, an associate professor of surgery at the U. of I. College of Medicine, described his experiences aboard the hospital ship *Hope* at a seaport in Ecuador.

At the January 20 meeting of the Woodbury County Medical Society, held at The Normandy, in Sioux City, **Dr. George A. Balla,** an attending surgeon at the Baylor Medical Center, in Dallas, discussed "Recent Advance in the Surgical Treatment of Cancer."

Dr. John C. Hoak, an assistant professor of internal medicine at the University of Iowa, has been elected a fellow of the American College of Physicians. To qualify, a physician must have a hospital or academic post and an interest in continuing education, and must have made contributions to scientific literature.

Dr. William E. Connor, an associate professor of internal medicine at the U. of I., has been named to the coordinating committee of the American Heart Association's Nationwide Stroke Program. The 22-member group guides the research, prevention, diagnosis, management and rehabilitation phases of the stroke program.

Dr. Robert Knox, a member of the Beaverdale Clinic since 1956, has relocated at 7580 Hickman Road, Des Moines.

Dr. Richard Moore, who practices obstetrics and gynecology in Des Moines, lectured on the hormonal aspects and diagnosis of trophoblastic tumors at a symposium on new concepts in gynecologic oncology sponsored by the Hahnemann Medical College, in Philadelphia, December 8-10.

Dr. F. C. Coleman, who moved from Des Moines to Tampa, Florida, a year ago, has been given the Scientific Products Foundation Award for outstanding service to pathology and medicine.

Dr. Wendell K. Downing, of Des Moines, was recently certified by the American Board of Colon and Rectal Surgery.

The participants in a panel discussion of venereal disease broadcast over KDPS-TV, the television station of the Des Moines Public Schools, on January 13, were **Dr. Julius Conner,** head of the Des Moines-Polk County Health Department, moderator; **Dr. Solomon Greenhill,** a dermatologist; **Dr. Arnold Nielsen,** a general practitioner; **Dr. Norman Rinderknecht,** an obstetrician and gynecologist; and **Dr. Harlan Rosenberg,** a urologist. Except for Dr. Nielsen, who practices in Ankeny, all of them have offices in Des Moines.

At the annual meeting of the Polk County Medical Society, in Des Moines on January 19, **Dr. R. B. Stickler** succeeded **Dr. Parker K. Hughes** as president. **Dr. Leo R. Pearlman** was chosen as president-elect; **Dr. James H. Dickens,** as secretary-treasurer; **Dr. Leon J. Galinsky,** as trustee; and **Dr. John W. Green, Jr.,** as councilor.

Deaths

Dr. Harold B. Moorehead, 78, of Underwood, died on January 5 of heart disease at a hospital in Council Bluffs. He was a graduate of the Creighton University Medical School, he practiced in Underwood for more than 50 years, and he was a Life Member of the Iowa Medical Society.

Dr. E. E. Stutsman, 83, an EENT specialist who practiced for 56 years at Washington, Iowa, died on December 14 in Corvallis, Oregon, where he and his wife were visiting their son.

Dr. Anthony M. Loes, 84, a Dubuque physician and surgeon for 55 years, died at his home there on December 15. He was a Life Member of the Iowa Medical Society, and was one of the founders of Sunny Crest Tuberculosis Sanitarium, which is now the Dubuque County Nursing Home.

Dr. Ellsworth L. Lindley, 52, a Cedar Rapids internist, died at a hospital there on December 24 after a six-month illness. He was a 1939 graduate of the U. of I. College of Medicine and a past-president of the Iowa Clinical Society.

Dr. Abraham Fleischman, 77, who practiced urology in Des Moines until about 10 years ago, died in Los Angeles on December 30 following a heart attack.

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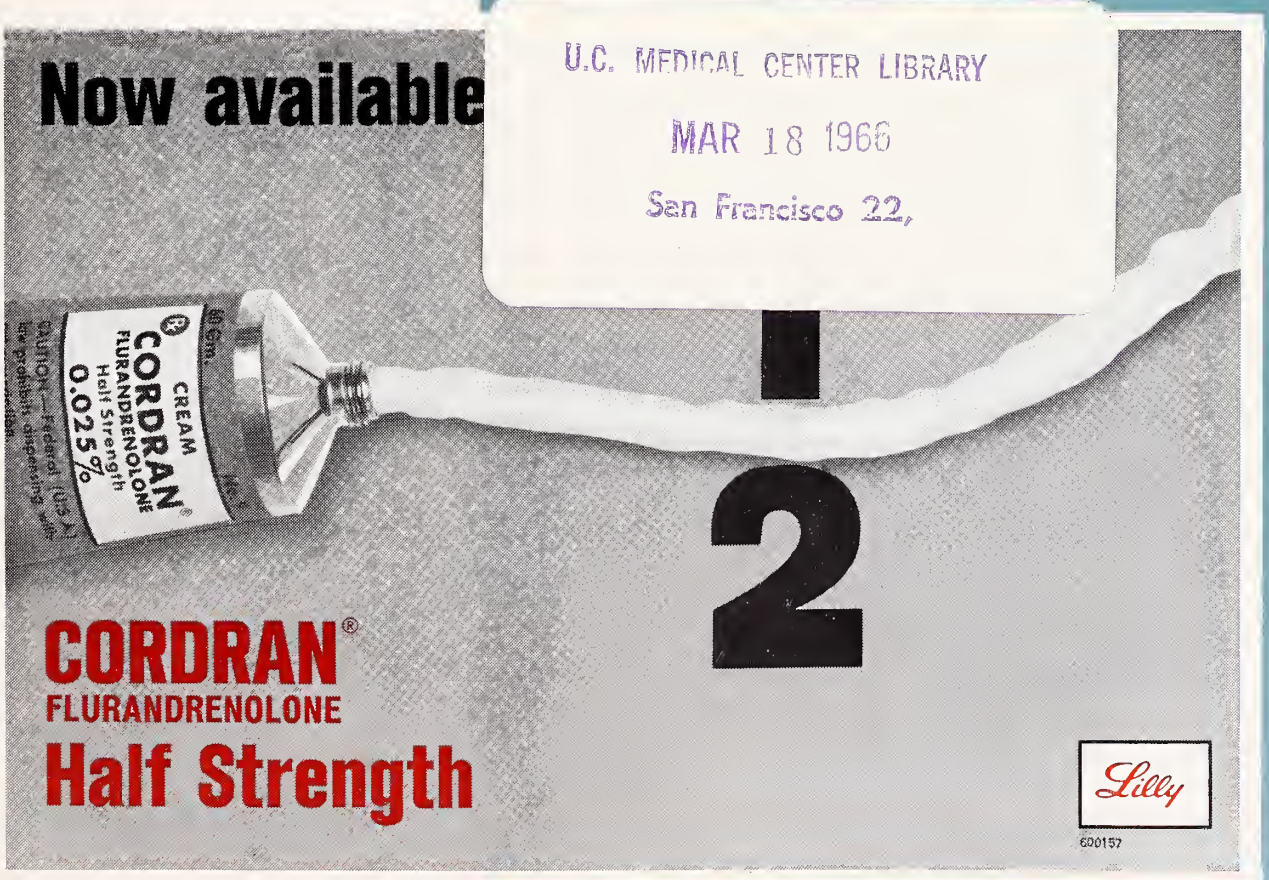

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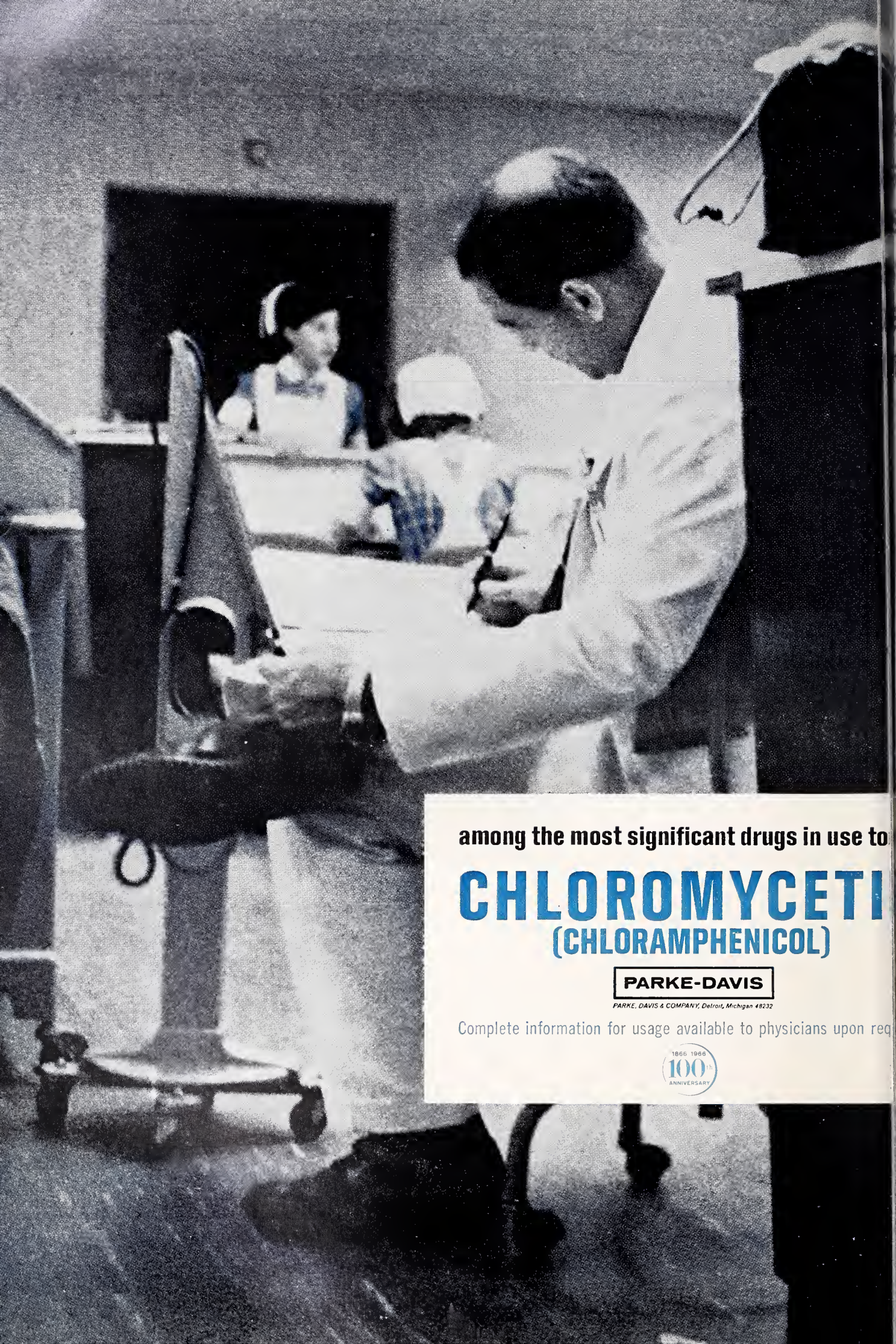
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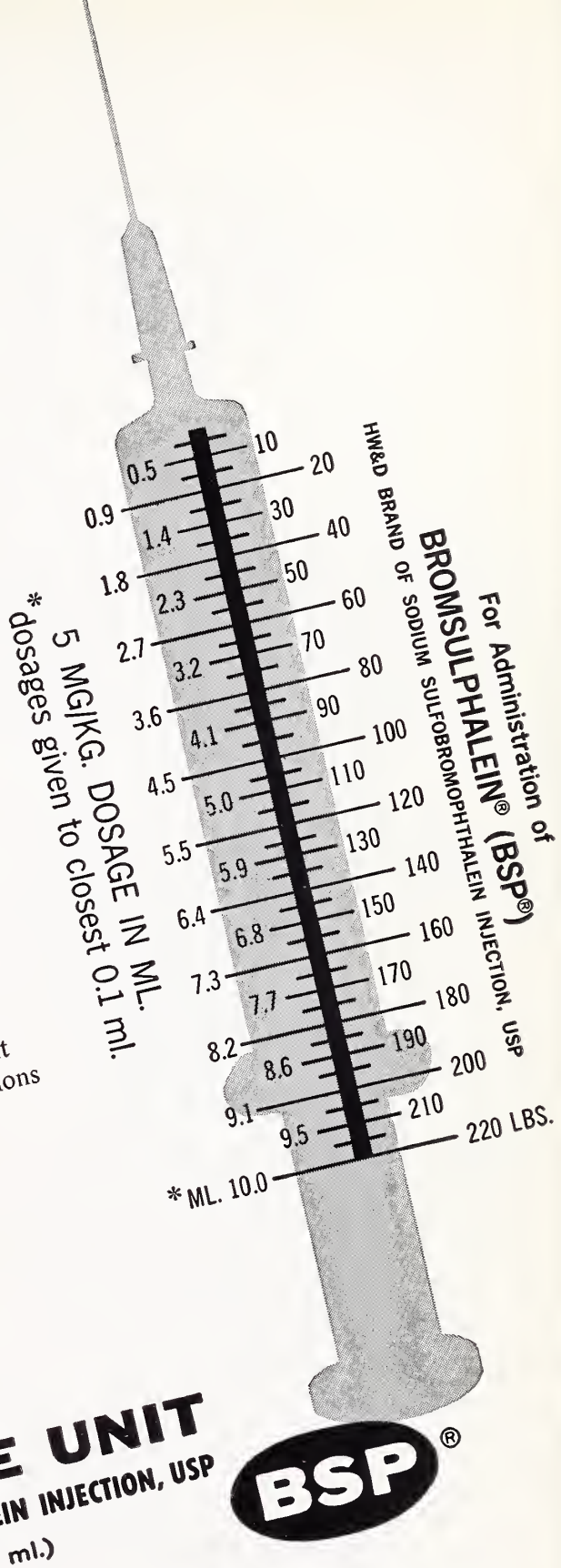

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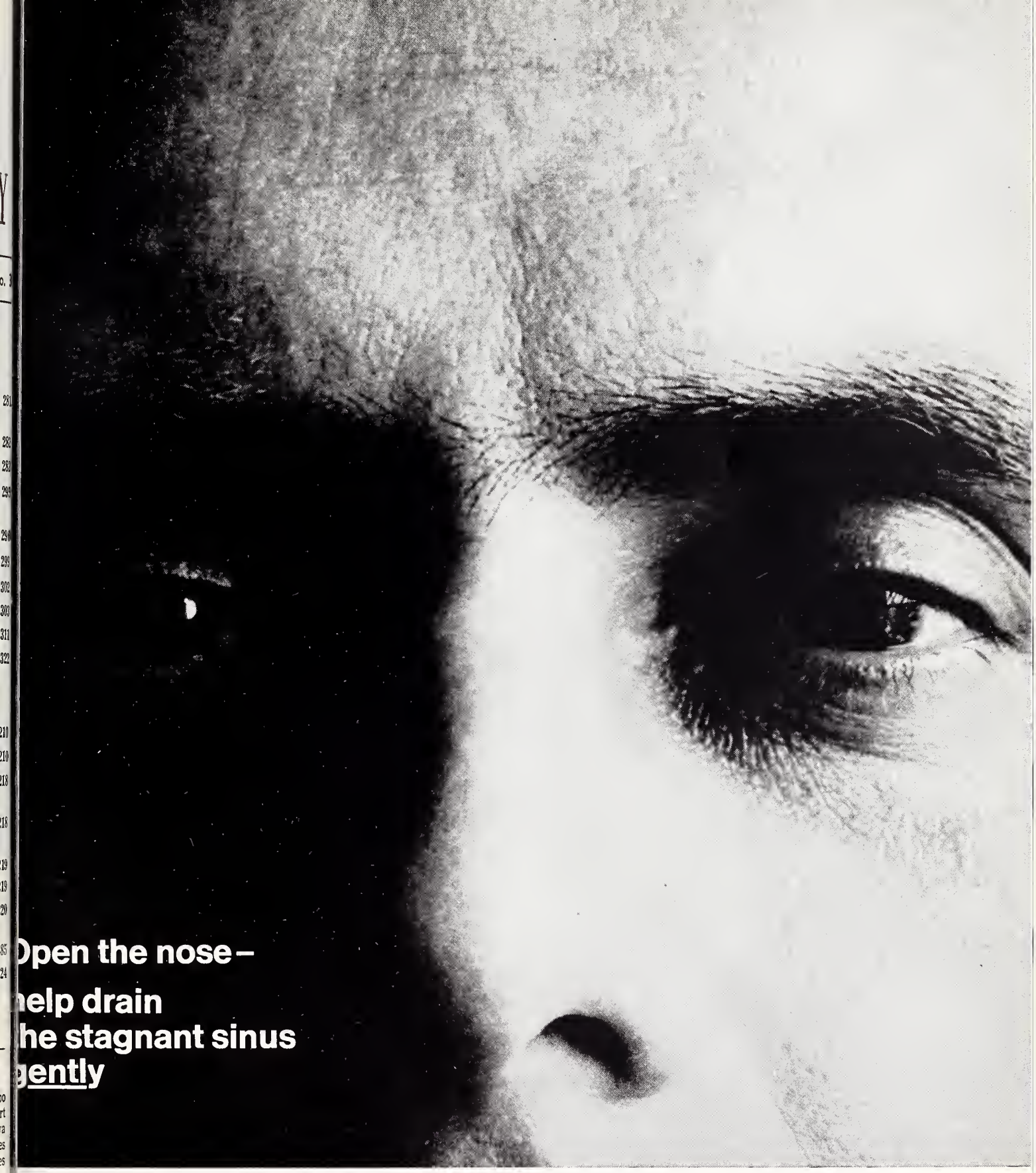

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*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

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The Month in Washington

Washington, D. C.—President Johnson has put a price tag of about $4.5 billion on his fiscal 1967 health programs, both domestic and international. The President's fiscal 1967 budget, for the year beginning next July 1, calls for spending about $4.3 billion on domestic health programs under the Department of Health, Education and Welfare. Medicare benefits will be in addition to this total, for they will be paid for largely by Social Security taxes.

Spending on domestic health programs would have been greater if some—such as the new heart disease, cancer and stroke program—had not been cut back because of the increased costs of the Vietnam war. The cutbacks were effected mainly by requesting smaller appropriations than Congress had approved. The appropriation requested for the heart disease, cancer and stroke program was only half of the $90 million authorized by Congress.

Johnson told Congress he would submit international health legislation to:

—create an International Career Service in Health;

—help meet health manpower needs in developing nations;

—combat malnutrition;

—control and eradicate disease;

—cooperate in worldwide efforts to deal with population problems.

Johnson said the United States must be prepared to help developing countries that ask for aid in controlling population expansion. He said: "Population growth now consumes about two-thirds of economic growth in the less-developed world. As death rates are steadily driven down, the individual miracle of birth becomes a collective tragedy of want."

Two federal reports—by the President's Council of Economic Advisers and the Social Security Administration—covered medical costs and overall national spending for health care. The annual report of the economic council conceded that the "true" increase in medical costs may have been less than the dollar increase. The report said: "In the most recent five years, medical costs have risen less rapidly than during the 1950's. This has been due primarily to the fact that prices of prescriptions and drugs have been declining. Also, the increase in charges for medical services—including doctors' and dentists' fees, eye examinations and eyeglasses, and hospital rates—has slowed down in comparison with the earlier period.

"The higher hospital and doctor charges reflected in the consumer price index may overstate the true increase in the cost of medical care when account is taken of the rising effectiveness of the care received. With the dramatic improvements in medical technology that have taken place over the postwar period, many patients get more real 'services' from each day's stay in the hospital, or each visit to the doctor, than before."

The Social Security Administration reported that the nation spent $36.8 billion for health care in 1964, almost tripling the $12.9 billion spent in 1950. Per capita expenditures more than doubled in the 15-year period, rising from $84 to $191 per person.

Over 90 per cent of the 1964 expenditures were for health services and supplies. The balance was spent for medical research and construction of medical facilities.

There was a considerable shift in method of payment for personal health services from direct out-of-pocket payments to third-party payments. Payments by third parties, which include insurance companies, governments, and philanthropic organizations, amounted to slightly over one-third of the personal health care expenditures in 1950, and almost half of those expenditures in 1964.

Government payments continued to provide about 22 per cent of the funds for all personal health services.

* * *

The Justice Department has ordered coordination of federal procedures to assure that no racial discrimination is practiced by medical facilities and institutions of higher learning which receive government funds. The Department of Health, Education and Welfare was assigned the main responsibilities, including:

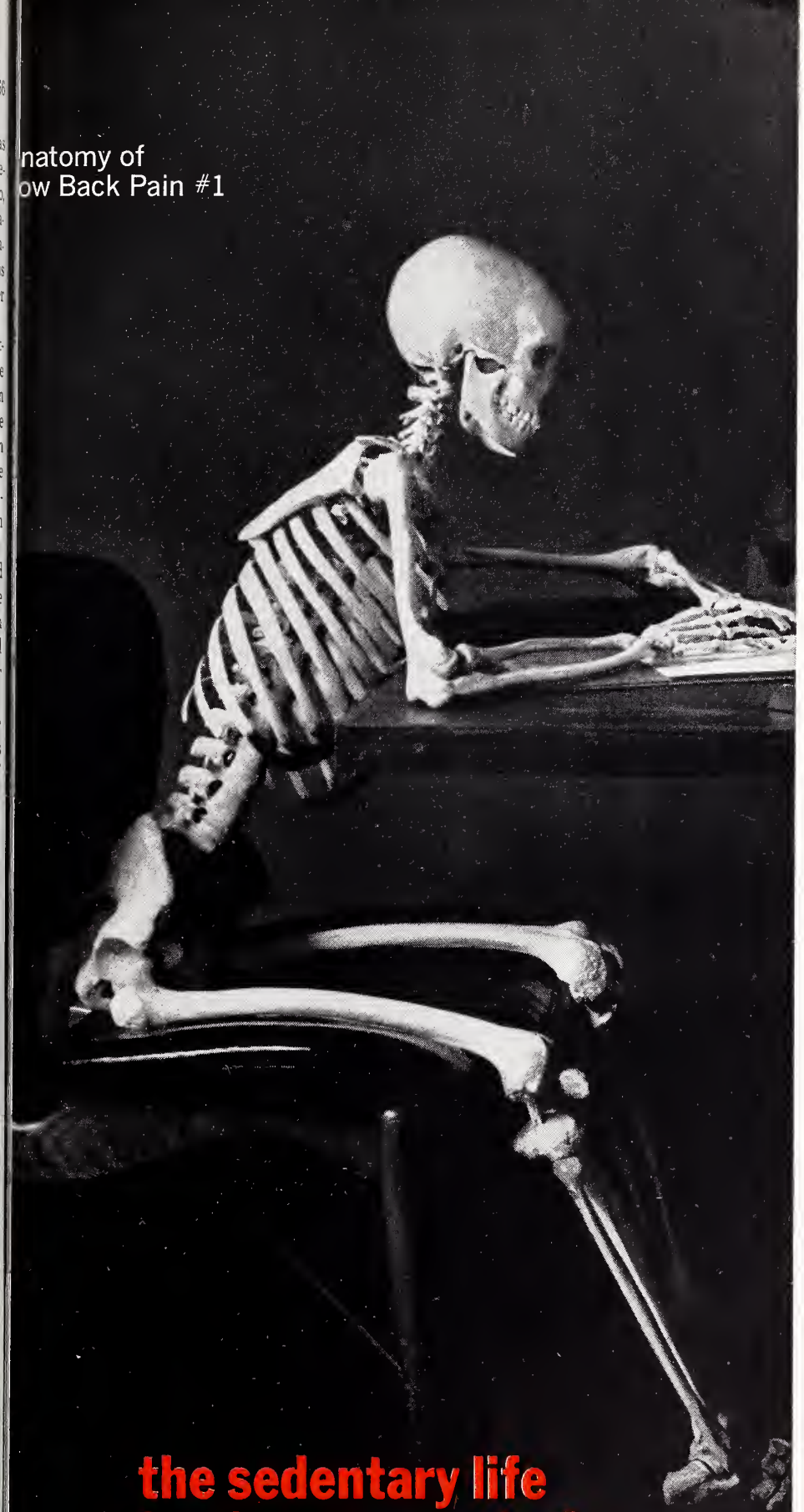
—Preparing and distributing a compliance form to be submitted by all medical facilities and institutions of higher learning which receive federal money, and evaluating the submitted forms.

—Conducting periodic reviews of recipients and investigating any discrimination complaints against them.

—Attempting to secure voluntary compliance and notifying other departments and agencies when any such effort fails.

* * *

Both the American Medical Association and the Food and Drug Administration have warned



the sedentary life is often the seat of low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

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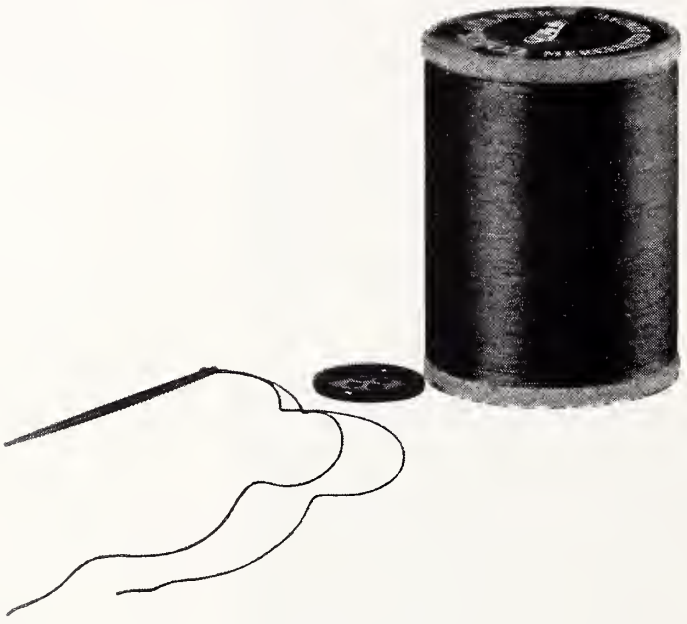

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the public against interpreting the acquittal of the promoters of Krebiozen as meaning that it is effective in the treatment of cancer. A federal court jury in Chicago found the promoters not guilty of fraud. "The results of a criminal proceeding should not be interpreted as establishing efficacy of the alleged new drug called Krebiozen by its promoters," the AMA said. "Cancer sufferers should consult with their physicians and not try to determine for themselves what is the best course of treatment in their own individual cases."

"As far back as 1963, Krebiozen was proven to be nothing more than mineral oil and creatine, a common laboratory chemical," the FDA said. "That scientific judgment still stands. The FDA will carry out its responsibility to the public by doing whatever will be necessary to keep Krebiozen out of interstate commerce. We will do this as a life-saving activity. Each day a person with treatable cancer relies upon Krebiozen is a day that brings him closer to death."

Vitamin-Fluoride Supplements for Preventing Tooth Decay

Daily doses of a vitamin-fluoride combination reduced children's tooth decay up to 63 per cent in a research project reported by three Indiana University scientists in the January-February issue of the JOURNAL OF DENTISTRY FOR CHILDREN. They cite the considerable evidence for the reduction of tooth decay through fluoridation of communal water supplies, but point out that many children do not have access to fluoridated water.

The investigators, Drs. J. C. Muhler, D. K. Hennon and G. K. Stookey, all of the Indiana University School of Dentistry, say, "The fluoride-vitamin supplements used in this study appear to provide an effective and practical method of supplying fluoride in those instances where it cannot be obtained through the communal water supply. They tested Tri-Vi-Flor drops, and Poly-Vi-Flor drops and chewable tablets, all of which are products of Mead Johnson Laboratories.

After 36 months there was a reduction of 63 per cent in dental caries in the surfaces of deciduous (temporary) teeth in the children who composed the test group, in Bloomington, Indiana, where the water supply is not fluoridated. In temporary teeth, the reduction in tooth decay was evident after only 16 months of product use, and the benefits increased as its use continued.

Because most of the children were very young, few permanent teeth had erupted after 36 months of product use, but there was a noticeable difference in the incidences of caries in permanent teeth between the test and control groups. "In theory," the authors said, "the greatest benefit of vitamin-fluoride supplements in reducing dental caries in permanent teeth would occur when the product is ingested at the earliest stage of tooth development possible and when the product is administered daily throughout the period of permanent-tooth formation, or from birth to about 8-10 years of age."

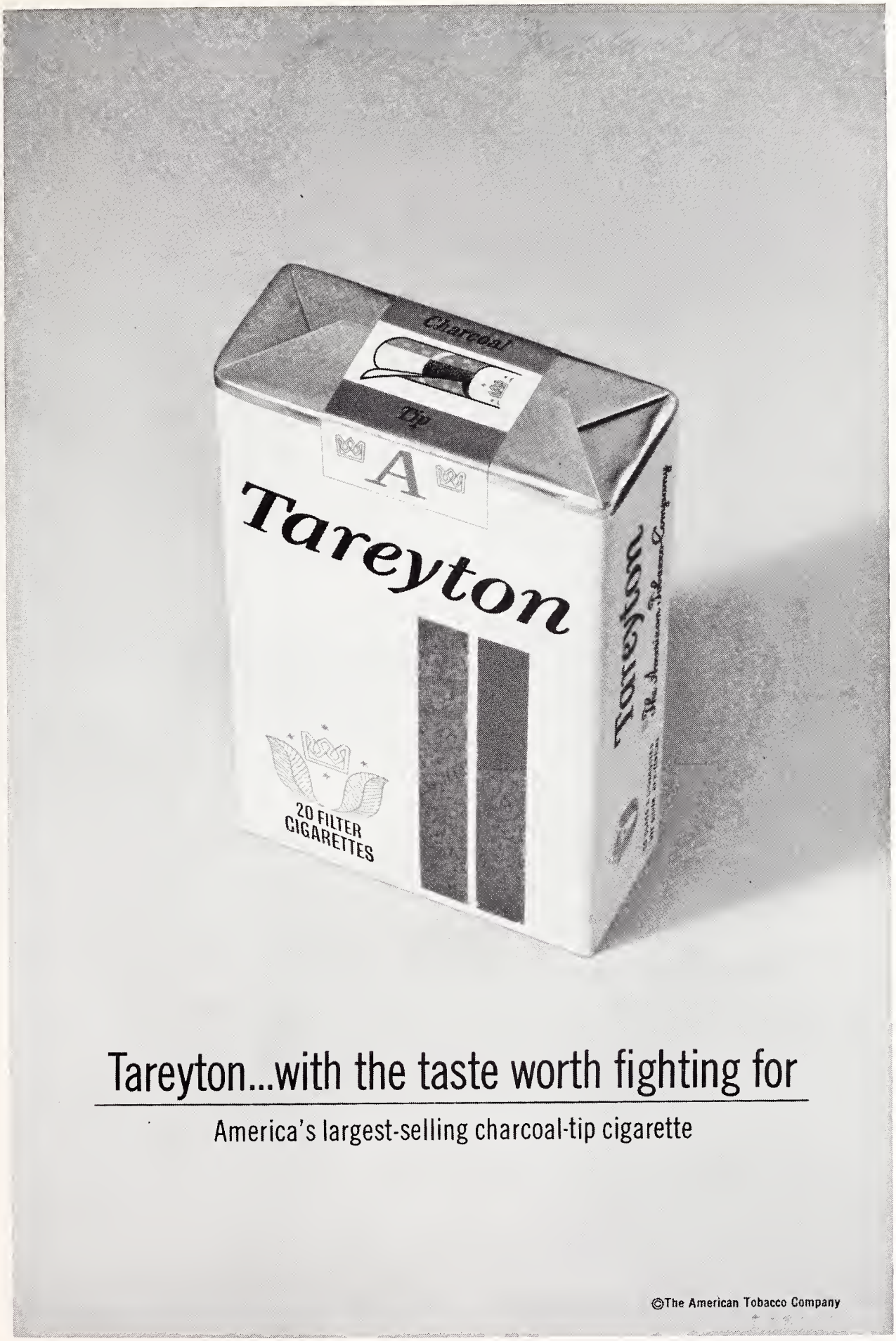
Very few children withdrew from the experiment, though in a previous study during which children were given sodium fluoride tablets nearly 80 per cent dropped out. The authors speculated that daily vitamin-taking is a well-established habit that must have made a difference in "user acceptance."

How Your Money Goes

In 1964, Americans spent more on cigarettes and other tobacco products ($7.8 billion) than on hospital care ($7.6 billion) and more on such items as cosmetics, haircuts, hairdos, and other items of personal care ($7.0 billion) than on doctors' bills ($6.7 billion). A total of $25.2 billion was spent for health care in 1964 which represents an increase of 7.7% over 1963. Recent figures indicate that the largest portion of health care expenditures went for hospital care ($7.6 billion) while physicians' services were next with $6.7 billion. Total consumer spending for all goods and services including health care climbed from $373.8 billion in 1963 to $398.9 billion in 1964 or an increase of 6.7%. A breakdown of consumer expenditures for various categories and the percentages of increased spending during 1964 follows:

Item	*1963*	*1964*	*% Increase*
	(In Millions of Dollars)		
Clothing accessories, and jewelry	$ 36,838	$ 40,018	8.6
Food and liquor	88,173	92,320	4.7
Foreign travel	2,778	2,884	3.8
Household operation	53,801	57,980	7.8
Housing	55,509	59,461	7.1
Personal business	18,192	19,761	8.6
Personal care	6,458	6,978	8.0
Private education and research	4,868	5,304	8.9
Recreation	21,581	23,824	10.4
Religious and welfare activities	5,343	5,791	8.4
Tobacco	7,758	7,820	0.8
Transportation	49,124	51,555	4.9
Health care	23,389	25,211	7.8
Appliances	961	1,054	9.7
Dentists	2,305	2,439	5.8
Drugs	4,137	4,352	5.2
Health insurance	1,653	1,757	6.3
Hospitals	6,772	7,618	12.5
Other services	1,155	1,235	6.9
Physicians	6,406	6,756	5.5
Total personal consumer expenditures	$373,812	$398,907	6.7

(U. S. Department of Commerce: *Survey of Current Business*, November 1965. Percentage calculations by AMA Department of Economics.)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Coming Meetings

IN STATE

Apr. 7-8 **10th Annual Raymond Blank Hospital Pediatric Conference,** Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.

Apr. 23 **Fifth Annual Orthopaedic and Rehabilitation Seminar,** Younker Memorial Rehabilitation Center, Des Moines.

Apr. 24-27 **Annual Meeting, Iowa Medical Society,** Savery and Fort Des Moines Hotels, Des Moines.

Apr. 25 **Annual Meeting, Iowa Society of Anesthesiologists,** Vic's Tally-Ho Restaurant, Des Moines.

CONTINENTAL U. S.

Mar. 1-3 **31st Midwinter Clinical Session of the Colorado Medical Society,** Brown Palace Hotel, Denver.

Mar. 2-3 **Seminar on Metabolic Diseases,** Hammack Auditorium, Menorah Medical Center, Kansas City, Missouri.

Mar. 2-3 **Annual Spring Symposium, Los Angeles County Heart Association,** Statler Hilton Hotel, Los Angeles.

Mar. 2-3 **Annual Meeting, Western Electroencephalography Society,** Hilton Hotel, San Francisco.

Mar. 2-4 **Air Pollution Medical Research Conference,** Ambassador Hotel, Los Angeles.

Mar. 3-4 **Symposium on Diabetes, University of Southern California,** Los Angeles.

Mar. 4-5 **Gynecological Problems for the Non-Gynecologist, University of California,** San Francisco.

Mar. 4-9 **55th Annual Meeting, International Academy of Pathology,** Statler Hilton Hotel, Cleveland.

Mar. 5-6 **The Knee, UCLA,** Los Angeles.

Mar. 5-6 **Sexual Conflicts and Adjustments, University of California,** San Francisco.

Mar. 6 **Symposium on Relationship Between Emotional Stress Factors and Coronary Heart Disease,** Mount Sinai Hospital Auditorium, Minneapolis.

Mar. 6-9 **55th Annual Meeting, International Academy of Pathology,** Statler Hilton Hotel, Cleveland.

Mar. 7-10 **29th Annual Meeting of the New Orleans Graduate Medical Assembly,** Roosevelt Hotel, New Orleans.

Mar. 7-10 **Pediatrics, University of Kansas School of Medicine,** Battenfeld Auditorium, Kansas City, Kansas.

Mar. 7-11 **Postgraduate Course on the Big Heart, American College of Psysicians,** Auditorium, Baylor University College of Medicine, Houston.

Mar. 9-10 **Maternal and Infant Health, University of Kansas School of Medicine,** Battenfeld Auditorium, Kansas City, Kansas.

Mar. 9-11 **Postgraduate Course on Operable Heart Disease, American College of Cardiology,** Mount Sinai Hospital, New York.

Mar. 9-13 **Diagnostic Radiology, University of California,** San Francisco.

Mar. 10-11 **5th National Symposium, Heart Association of Southeastern Pennsylvania,** Sheraton Hotel, Philadelphia.

Mar. 10-14 **Pulmonary Problems,** UCLA, Los Angeles.

Mar. 11-12 **Annual Postgraduate Seminar and Clifford D. Sweet Lecture, Children's Hospital Medical Center,** Oakland.

Mar. 11-17 **34th Alumni Postgraduate Convention, Loma Linda University School of Medicine,** Los Angeles.

Mar. 12 **Cancer: Childhood and Adult Tumors, University of California,** at Children's Hospital, San Francisco.

Mar. 12-13 **Neuropsychiatry in Daily Practice, University of California, San Francisco,** at Agnews State Hospital, San Jose.

Mar. 14-16 **Annual Meeting, Society of Toxicology,** Williamsburg, Virginia.

Mar. 15-17 **Cardiovascular Diseases, University of Kansas School of Medicine,** Battenfeld Auditorium, Kansas City, Kansas.

Mar. 16 **Annual Postgraduate Symposium on Heart Disease,** O'Connor Hospital, San Jose.

Mar. 16 **Symposium on Obesity, University of Southern California,** Los Angeles.

Mar. 16-18 **Postgraduate Course on Ultrasonic Diagnosis, University of Colorado School of Medicine,** Denver.

Mar. 18-19 **19th National Conference on Rural Health, AMA Council on Rural Health,** Broadmoor Hotel, Colorado Springs.

Mar. 18-20 **23rd Annual Meeting, American Psychosomatic Society,** Sheraton-Chicago Hotel, Chicago.

Mar. 19 **Catecholamines and Adrenergic Blocking Agents, American College of Cardiology and the University of Southern California,** Ambassador Hotel, Los Angeles.

Mar. 19-20 **Annual Meeting, California Radiological Society,** Biltmore Hotel, Los Angeles.

Mar. 20-23 **1966 Annual Scientific Assembly, California Medical Association,** Biltmore Hotel, Los Angeles.

Mar. 22-23 **International Biomagnetic Symposium, University of Illinois College of Pharmacy,** Chicago.

Mar. 24 **Neurological Problems of the Elderly Patients, University of Wisconsin and State Medical Society,** University Hospitals, Madison.

Mar. 24-25 **Spring Conference on Narcotic Addiction, Illinois State Medical Society,** Sherman House, Chicago.

Mar. 24-26 **Conference on Pediatric and Adolescent Gynecology, New York Academy of Sciences,** Waldorf-Astoria Hotel, New York.

Mar. 25-27 **Postgraduate Assembly in Anesthesiology, Anesthesia Section, Los Angeles County Medical Association,** International Hotel, Los Angeles.

Mar. 25-27 **Sex Disorders in Clinical Practice, University of California,** San Francisco.

Mar. 26-30 **American Society of Abdominal Surgeons,** Sherman House, Chicago.

Mar. 28-30 **Symposium on Vascular Disease,** Albert Einstein Medical Center, Philadelphia.

Mar. 28-31 **5th International Congress, Colleguim Internationale Neuro-Psychopharmacologicum,** Sheraton Park Hotel, Washington, D. C.

Mar. 30-31 **Symposium on Progress in Biochemistry and Therapeutics, "Enzymes in Mental Health,"** Carl Neuburg Society for International Scientific Relations, Grand Ballroom, Waldorf-Astoria Hotel, New York.

Mar. 30-Apr. 1 **Annual Sight-Saving Conference of the National Society for the Prevention of Blindness,** Hotel Roosevelt, New York.

Apr. 1-2 **Joint Manipulations in Perspective, University of California,** San Francisco.

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Apr. 1-2	**Contrast Media in Abdominal Disease: A Program for the Practicing Physician, University of California,** San Francisco.
Apr. 4-5	**Third Annual AMA Congress on Environmental Health Problems,** Drake Hotel, Chicago.
Apr. 4-6	**Biomedical Communication: Problems and Resources, New York Academy of Sciences and the Public Health Service Audiovisual Facility,** Waldorf-Astoria Hotel, New York City.
Apr. 4-7	**Symposium on Trauma, Committee on Injuries, American Academy of Orthopaedic Surgeons,** Olympic Hotel, Seattle.
Apr. 4-8	**Mental Retardation Institute, University of Southern California,** Los Angeles.
Apr. 4-8	**Recent Advances in Gastroenterology and Gastrointestinal Pathology, University of Colorado School of Medicine,** Denver.
Apr. 4-8	**39th Annual Spring Congress in Ophthalmology and Otolaryngology, The Gill Memorial Eye, Ear and Throat Hospital,** Roanoke, Virginia.
Apr. 4-8	**Workshop in Teratology, The University of Colorado,** Boulder.
Apr. 6	**Sports Injuries, UCLA,** Los Angeles.
Apr. 11-13	**Cine-Angiographic Techniques in Cardiovascular Diseases, American College of Chest Physicians,** Cleveland Clinic, Cleveland.
Apr. 12-15	**18th Annual Postgraduate Seminar, Illinois Academy of General Practice,** Sherman Hotel, Chicago.
Apr. 16-17	**The Uncertain Quest: The Teen-Ager's World, University of California,** San Francisco.
Apr. 18-22	**47th Annual Meeting of the American College of Physicians,** Americana and New York Hilton Hotels, New York City.
Apr. 20-23	**Tenth Annual Postgraduate Course in Fractures and Other Trauma, Chicago Committee on Trauma of the American College of Physicians,** John B. Murphy Memorial Auditorium, Chicago.
Apr. 23-24	**Neuropsychiatry for the Non-Psychiatric Physician in General Practice, University of California, San Francisco,** at Sutter Memorial Hospital, Sacramento.
Apr. 25-27	**Annual Meeting, Council on Medical Television, University of California,** San Francisco.
Apr. 25-27	**Annual Spring Session, American Academy of Pediatrics,** Queen Elizabeth Hotel, Montreal, Canada.
Apr. 27-29	**Symposium "Selected Aspects of Cutaneous Precancers, Cancers and Pseudocancers," Department of Dermatology, New York University Medical Center,** New York.
Apr. 27-30	**16th Hahnemann Symposium, Atherosclerotic Vascular Disease,** Marriott Motor Hotel, Philadelphia.
Apr. 28-29	**General Surgery, University of California,** San Francisco.
Apr. 28-29	**Symposium on Hypertension, University of Southern California,** Los Angeles.
Apr. 28-30	**Postgraduate Course on Clinical Dermatology, University of Colorado School of Medicine,** Denver.
Apr. 28-30	**Third Annual Midwest Conference on Anesthesiology, Illinois Society of Anesthesiologists,** Continental Plaza Hotel, Chicago.

DEPROL®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

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Before prescribing, consult package circular.

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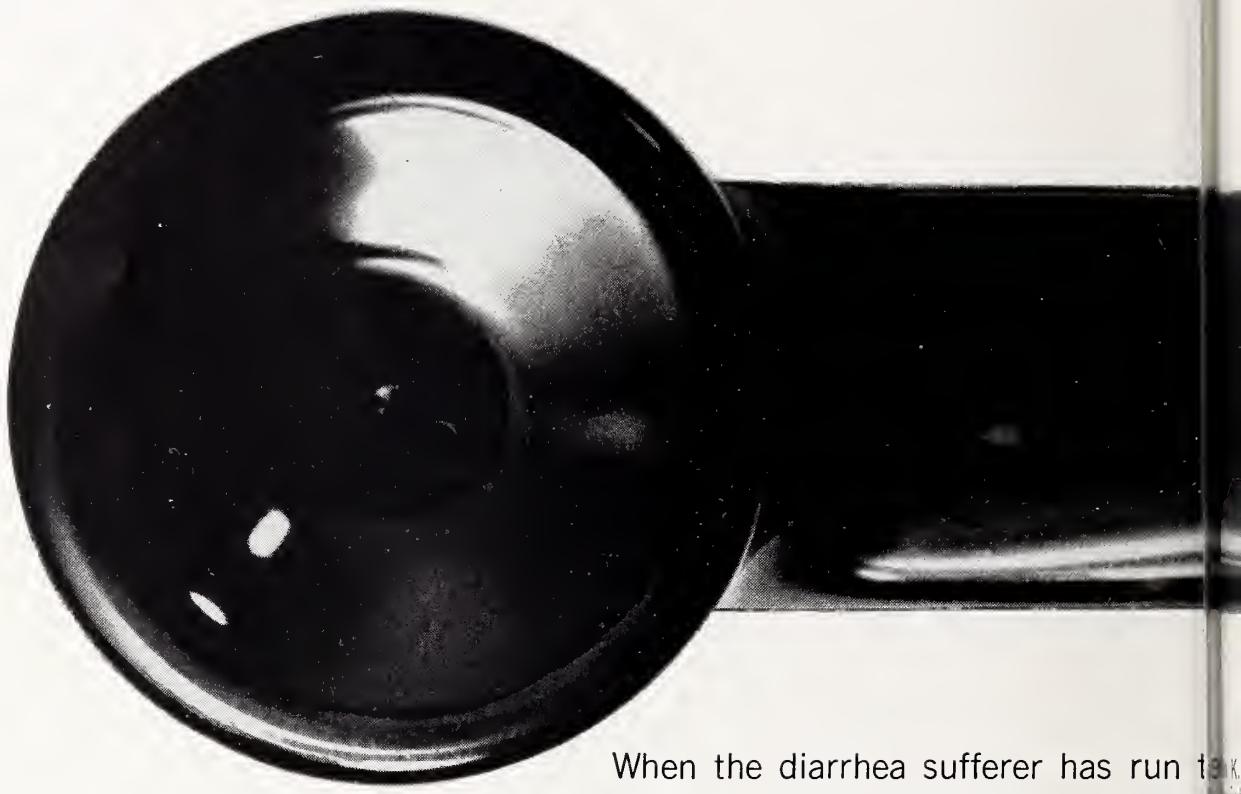

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gamut of home remedies without succe
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the call for help. It can be counted on
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inflammation, inhibit enteric pathoger
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CREMOMYCIN combines the bacteriosta
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cin, with the adsorbent and protective c
mulcents, kaolin and pectin, for compr
hensive control of diarrhea.

Indications: Diarrhea. *Contraindications:* Kaol
Withhold if diverticulosis is present or suspect
Precautions: Sulfonamide: Continued use requi
supplementary administration of thiamine and vi

your ℞ for Cremomycin can provide relief

in K. Neomycin: Patient should be observed for
w infections due to bacteria or fungi. *Side Effects:*
lfonamide: Sensitivity reactions may occur (e.g.,
in rashes, anemia, polyneuritis, fever; agranulo-
tosis with a fatal outcome has been reported).
eduction of thiamine output in the feces and of
tamin K synthesis has been observed. Neomycin:
ausea, loose stools possible.
efore prescribing or administering, read product
rcular with package or available on request.

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Cremomycin®

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omposition: Each 30 cc. contains neomycin sulfate
00 mg. (equivalent to 210 mg. of neomycin base),
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m., pectin 0.27 Gm.

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Sunscreen Mixture Doesn't Wash Off

A sunscreen lotion that doesn't wash off could be a result of research reported in a publication of the American Medical Association. The material gives sunlight protection that cannot be removed by sweating, swimming, or rubbing.

Physicians at the University of Michigan Hospital who tested the mixture say treated areas of skin in many cases resisted sunburn three times longer than untreated areas on the same persons. Of 18 persons tested, all were able to remain at least an hour in strong summer sunlight without noticeable reddening. The mixture does not give immediate protection. It must be applied at least 12 hours before going into the sun. Persons with rashes, sores, or other forms of dermatitis cannot use the lotion.

This method for altering the built-in light filter of the skin was first reported in 1962 by two of the four physicians making this report. They noted that the skin's outer layer, the stratum corneum, already has some ability to block ultraviolet rays, which cause sunburning. The mixture tested produces a chemical reaction which alters the skin's filter mechanism and blocks still more of the sun's ultraviolet radiation.

The two chemicals used are dihydroxyacetone (DHA) and naphthoquinone (lawsone). Mixed with water and isopropyl alcohol, the chemicals were applied to abdominal skin of the test volunteers. In every case, their skin had been unexposed or minimally exposed to sunlight during the previous nine months. The volunteers applied the mixture 14 to 18 hours before entering sunlight, and washed with soap and water four hours before sunbathing. Their median reaction time—the time required to produce some skin reddening—was 33 minutes for untreated skin areas and 102 minutes for treated skin. All 18 volunteers showed reactions on unprotected skin after 60 minutes in the sunlight, but none on the protected areas.

Another mixture, using increased amounts of lawsone, was tested on four volunteers. These persons were able to tolerate up to four hours of sunlight without reddening. Additional tests showed that more protection was given with greater amounts of the mixture and more frequent application. Still to be perfected is a way to keep the chemicals stable when mixed and stored at room temperature.

"The obvious advantage of this 'built-in' protection is that it cannot be washed off but remains until it wears off," said an editorial in the February 14 J.A.M.A. "Future improvement and modification of the basic compounds used in the mixture may offer advantages over available topical sun screens."

Authors of the research report are Ramon S. Fusaro, M.D., Walter J. Runge, M.D., Francis W. Lynch, M.D., and C. J. Watson, M.D., all of the University of Minnesota Hospital, Minneapolis. The report appeared in the January issue of ARCHIVES OF DERMATOLOGY.

Additional Products Subject to Drug-Abuse Amendments

As was announced in the February issue of the JOURNAL (page 120), physicians who do not regularly supply medicines to their patients and charge for them have no need to be concerned about the record-keeping required by PL 89-74.

Dispensing physicians, however, will be interested in knowing of a form entitled "Inventory of Stimulant and Depressant Drugs" which the American Pharmaceutical Association has published for the convenience of its member pharmacists. It lists all of the products of which they were required to maintain up-to-date records when the Law took effect, on February 1, 1966, it includes spaces for the insertion of products that may subsequently be brought under the provisions of the Law, and it provides columns in which the dosage forms, quantities and strengths of each can be entered. The APhA sells those record forms for $7.50 per hundred, but whether smaller quantities are available is uncertain. The APhA's address is 2215 Constitution Ave N.W., Washington 20037.

As of February 18, 1966, the following products came under the provisions of the Law, by order of the HEW Secretary:

Established name	*Some trade or other names*
d-, dl-Methamphetamine and their salts	d, dl-Desoxyephedrine and their salts
Phenmetrazine and its salts	Preludin
Chlordiazopoxide and its salts	Librium
Chloral hydrate	Chloral
Diazepam	Valium
Ethchlorvynol	Placidyl
Glutethimide	Doriden
Meprobamate	Miltown, Equinal, Meprospan, Meprotabs
Methyprylon	Noludar
Paraldehyde	— — — —
DMT	Dimethyltryptamine
LSD-25; LSD	d-Lysergic acid diethylamide
Mescaline and its salts	— — — —
Peyote	— — — —
Psilocybin; psilocibin	— — — —
Psilocyn; psilocin	— — — —

High-Risk Diabetes Screening Quadruples Casefinding in New Jersey

A year-round casefinding program which concentrates on "high-risk" population groups is turning up 34 new cases of diabetes for every 1,000 people tested, according to a report in the February issue of GP. An average of only 8.6 cases per thousand is obtained nationally in diabetes screening programs, most of which test random populations. High-risk groups (people most likely to have diabetes without knowing it) include relatives of known diabetics, women who have borne large babies, the obese and the elderly.

The high-risk screening program is being conducted in East Orange, New Jersey, by the local and state health departments and the Essex County Medical Society. The East Orange Health Department carries on an extensive promotional campaign with leaflets, posters, exhibits, newspaper articles and films urging high-risk people to take free blood tests. Statisticians analyzed data for a 15-month period beginning in September, 1963, during which 2,873 people were screened for diabetes. Not all of these fell within the scope of the year-round high-risk program, for many of the tests were conducted during Diabetes Week, when less selectivity was possible. The year-round portion of the detection program, exercising the highest degree of selectivity, found 34 cases per 1,000. During Diabetes Week, when many young adults and other low-risk people were tested, the yield of new cases dropped to 16 per 1,000. The fact that this lower yield is almost double the average obtained nationally is due to the year-round promotional campaign aimed at high-risk groups, for people in those categories often wait until that time to appear for testing. All screening tests in the sample studied were venous blood-glucose determinations.

By lowering the cost-per-new-case to a fraction of the national average, the high-risk screening method may make it possible for many local groups—even those with limited funds and personnel—to detect significant numbers of previously undiagnosed diabetics through relatively small-scale screening programs. The Upjohn Company, Kalamazoo, Michigan, will supply promotional materials.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 529-36th Street, Des Moines, Iowa 50312.

With Tongue in Cheek

REPORT

BY ELBERT E. MUNGER, JR., M.D., CHAIRMAN OF THE UTILIZATION COMMITTEE, TO THE CLAY COUNTY MEDICAL SOCIETY, PROPOSING A TENTATIVE PLAN TO BE FOLLOWED BY SUCH A COMMITTEE IN THE SPENCER MUNICIPAL HOSPITAL.

December 27, 1965

Mindful of the responsibility remaining in the hands of the medical staff of a hospital, and with the purpose of expediting the implementation of the service referred to above,

RESOLVED that the Clay County Society requests the Medical Staff of the Spencer Municipal Hospital to form a committee composed of the officers of the staff: president, vice-president, secretary, treasurer and any others in line; that the title of this committee shall be Committee for Investigation of Admissions—For Better Information (or, for brevity, C.I.A.-F.B.I.); that all staff members be requested to complete Form XYZ accounting for each patient's residence in the hospital and give it to that committee; that the C.I.A.-F.B.I. shall examine any XYZ's presented by the nursing, administrative or governing departments; and that in case the C.I.A.-F.B.I. finds a serious violation in the use of the hospital, the C.I.A.-F.B.I. shall decide either to throw out the patient and/or the attending physician, or to forget all about it in the hope of furthering the Great Society.

Moved that the foregoing be approved as a resolution, and that it be entered in the minutes of the meeting.

Seconded.

Passed.

Expansion at the University of Nebraska College of Medicine

A $15 million modernization and expansion of the University of Nebraska College of Medicine was assured recently with the announcement that the USPHS surgeon general has approved a federal grant of $8,079,924. The Nebraska Legislature appropriated the remainder last summer.

In the first phase, the University will build 189 new hospital beds, two new floors for its clinic wing, and a new basic sciences building. Older areas of the hospital will be remodeled and renovated. The construction program should be completed in about two years, after which it is expected that the entering freshman medical classes will be increased by about 20 per cent.

Courses for Presently Inactive Nurses

A program aimed at increasing the supply of nurses in Iowa through a set or reorientation courses has been announced by the Iowa Nurses Association, the Health Occupations Education Program of the University of Iowa, and the State Department of Health. It is estimated that there are 10,000 nurses in the state who are registered but not active as nurses.

The nurse-reorientation course will be offered at various locations in the state in cooperation with community health and education personnel. A small tuition fee will be charged to help defray local costs. The 30-36 hour course of instruction will use the patient-centered approach, will be based on scientific principles, and will integrate public health, mental health, nutrition, pharmacology and rehabilitation. Along with theory, the nurses will receive 10 to 20 hours of supervised clinical experience either in a hospital area or in selected areas of other health agencies in the local community.

Miss Elizabeth E. Kerr, assistant professor of nursing, is director of the U. of I. Health Occupations Education Program. Mrs. Dorothy Stewart, who comes to the U. of I. from a post as in-service consultant at Jane Lamb Hospital, Clinton, will coordinate the project. She holds a master's degree in nursing education from the University of Chicago, and has served as medical-surgical instructor and director of nursing at three hospitals in Illinois, and as an assistant professor of nursing at Illinois Wesleyan University, Bloomington.

Midwest Conference of Anesthesiology

"Metabolism: Science and Practice of Anesthesia" will be the topic of the Third Annual Midwest Conference of Anesthesiology sponsored by the Illinois Society of Anesthesiologists, at the Continental Plaza Hotel, Chicago, April 28-30.

The speakers will include Britton Chance, M.D., University of Pennsylvania; Russel A. VanDyke, Ph.D., Dow Chemical Company; Henry L. Price, M.D., University of Pennsylvania; J. F. Catchpool, M.D., University of California; S. C. Alexander, M.D., University of Pennsylvania; F. G. Carpenter, M.D., Dartmouth Medical School; Stephen J. Galla, M.D., University of Pittsburgh; Stuart Cullen, M.D., University of California; Emmanuel Papper, M.D., Columbia-Presbyterian Medical Center; Nicholas Greene, M.D., Yale University; C. R. Stephen, M.D., Duke University; Louis R. Orkin, M.D., Albert Einstein College of Medicine; Robert Virtue, M.D., University of Colorado; James Eckenhoff, M.D., and Duncan Holaday, M.D., University of Chicago; and Max S. Sadove, M.D., University of Illinois.

For further information, address T. L. Ashcraft, M.D., 33 East Cedar, Chicago 60611.

Fifth Annual

Orthopaedic and Rehabilitation Seminar

Saturday, April 23, 1966
Younker Memorial Rehabilitation Center
Des Moines, Iowa

(All sessions will be held in Iowa Methodist School of Nursing Auditorium, 1117 Pleasant Street)

8:30 a.m.-9:00 a.m. Registration and Coffee—Auditorium, School of Nursing

9:00 a.m.-10:00 a.m. "Bacterial Infections of Joints, Bursae, and Related Structures"—Patrick J. Kelly, M.D., associate professor of orthopaedic surgery, University of Minnesota; consultant, orthopaedic surgery, Mayo Clinic

10:00 a.m.-11:00 a.m. "Fractures of the Femur"—H. Osmond-Clarke, C.B.E., F.R.C.S., orthopaedic surgeon to H.M. the Queen; consultant to the Royal Air Force; consulting orthopaedic surgeon, The London Hospital

11:00 a.m.-12:00 noon "Experience in the Use of the Soviet Bioelectric Upper Extremity Prosthesis: Patient Demonstration"—Gustave Gingras, M.D., executive director, Rehabilitation Institute of Montreal

12:00 -1:15 p.m. LUNCH—School of Nursing Gymnasium

1:15 p.m.-2:15 p.m. "Therapeutic Exercises; Isometric, Isotonic, or What?"—Donald L. Rose, M.D., professor of physical medicine, University of Kansas Medical Center

2:15 p.m.-3:15 p.m. Topic to be announced—H. Osmond-Clarke, C.B.E., F.R.C.S.

3:30 p.m.-4:30 p.m. "Summary of Symposium on Osteotomy for the Painful Hip"—Carroll B. Larson, M.D., professor and chairman, Department of Orthopaedic Surgery, University of Iowa, College of Medicine, Iowa City; president, American Academy of Orthopaedic Surgeons

4:30 p.m.-5:00 p.m. TOUR OF YOUNKER MEMORIAL REHABILITATION CENTER (Walter L. Modaff, M.D., associate physiatrist, will accompany those physicians wishing to tour the Younker Center)

(Discussion time will follow each lecture)

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Allamakee	R. R. Jeffries, Waukon	M. F. Kiesau, Postville	C. R. Rominger, Waukon
Appanoose	E. A. Larsen, Centerville	W. I. Evans, Centerville	E. A. Larsen, Centerville
Audubon	H. K. Merselis, Audubon	R. L. Bartley, Audubon	H. K. Merselis, Audubon
Benton	J. E. Blumgren, Vinton	C. E. Douglas, Belle Plaine	N. C. Knosp, Belle Plaine
Black Hawk	M. M. Wicklund, Waterloo	G. W. Heine, Cedar Falls	C. D. Ellyson, Waterloo
Boone	T. K. Leonard, Madrid	W. G. Dennert, Boone	E. E. Linder, Ogden
Bremer	E. H. Stumme, Denver	J. W. Rathe, Waverly	R. E. Shaw, Waverly
Buchanan	R. J. Moore, Independence	P. H. Tenney, Independence	P. J. Leehey, Independence
Buena Vista	R. P. Noble, Alta	J. A. Cornish, Storm Lake	R. R. Hansen, Storm Lake
Butler	D. M. Everson, Shell Rock	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun			G. S. Rost, Lake City
Carroll	J. R. Martin, Carroll	A. D. Anneberg, Carroll	J. M. Tierney, Carroll
Cass			E. M. Juel, Atlantic
Cedar	G. H. Utley, Clarence	O. E. Kruse, Tipton	O. E. Kruse, Tipton
Cerro Gordo	J. S. Westly, Mason City	W. V. Wulfekuhler, Mason City	H. G. Marinos, Mason City
Cherokee	H. J. Fishman, Cherokee	M. D. Hayden, Cherokee	H. J. Fishman, Cherokee
Chickasaw	D. R. Olsen, New Hampton	A. F. Benetti, New Hampton	M. J. McGrane, New Hampton
Clarke			
Clay	A. W. Kilness, Spencer	Eunice M. Christensen, Spencer	G. F. Fieselmann, Spencer
Clayton	C. C. Smith, McGregor	D. W. Pfeiffer, McGregor	P. R. V. Hommel, Elkader
Clinton	G. A. Chalian, Clinton	G. D. Aurand, Clinton	M. E. Barrent, Clinton
Crawford	J. L. Flood, Denison	J. M. Hennessey, Manilla	R. A. Huber, Charter Oak
Dallas-Guthrie	D. W. Todd, Guthrie Center	R. J. Peterson, Panora	A. G. Felter, Van Meter (D) W. A. Seidler, Jamaica (G)
Davis	H. M. Perry, Bloomfield	P. T. Meyers, Bloomfield	P. T. Meyers, Bloomfield
Decatur-Ringgold	L. N. Spohnheimer, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni (D) D. E. Mitchell, Mount Ayr (R)
Delaware	R. E. Clark, Manchester	J. D. Compton, Edgewood	J. E. Tyrrell, Manchester
Des Moines	J. L. Saar, Jr., Burlington	H. B. Tjaden, Burlington	R. B. Allen, Burlington
Dickinson	R. J. Coble, Lake Park	E. L. Johnson, Spirit Lake	E. L. Johnson, Spirit Lake
Dubuque	L. P. Alt, Dubuque	C. M. Strand, Dubuque	R. J. McNamara, Dubuque
Emmet	D. E. Wolters, Estherville	C. V. Lindholm, Armstrong	R. L. Cox, Estherville
Fayette	A. E. Berry, Oelwein	J. P. Gallagher, Oelwein	A. F. Grandinetti, Oelwein
Floyd	R. M. Nielsen, Charles City	E. J. Goen, Charles City	E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	D. K. Benge, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	K. D. Rodabaugh, Tabor
Greene	G. F. Canady, Jefferson	A. A. Knosp, Jefferson	E. D. Thompson, Jefferson
Grundy	G. D. Button, Conrad	J. R. Scott, Grundy Center	J. E. Rose, Grundy Center
Hamilton	B. F. Howar, Webster City	E. F. Brown, Webster City	G. A. Paschal, Webster City
Hancock-Winnebago	D. H. Brown, Forest City	S. M. Haugland, Lake Mills	J. R. Camp, Britt
Hardin	H. O. Stoutland, Ackley	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison			A. C. Bergstrom, Missouri Valley
Henry	H. M. Readinger, New London	C. W. Toland, Mount Pleasant	J. S. Jackson, Mount Pleasant
Howard	D. O. Maland, Cresco	R. G. Boeke, Cresco	P. A. Nierling, Cresco
Humboldt	Beryl Michaelson, Dakota City	M. L. Northup, Humboldt	I. T. Schultz, Humboldt
Ida	J. W. Martin, Holstein	J. B. Dressler, Ida Grove	J. B. Dressler, Ida Grove
Iowa	R. L. Sauer, Marengo	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	O. L. Frank, Maquoketa	P. F. Brown, Maquoketa	F. J. Swift, Jr., Maquoketa
Jasper	D. R. Onnen, Newton	P. J. Cusack, Newton	J. W. Ferguson, Newton
Jefferson	G. E. Egli, Fairfield	W. C. Bauman, Fairfield	J. W. Castell, Fairfield
Johnson	S. E. Ziffren, Iowa City	R. J. Joynt, Iowa City	G. W. Howe, Iowa City
Jones	O. E. Senft, Monticello	J. J. Randolph, Monticello	L. D. Caraway, Monticello
Keokuk	K. L. McGuire, Keota	R. G. Gillett, Sigourney	E. R. Gann, Sigourney
Kossuth	J. J. Lesiak, Titonka	R. E. Jongewaard, Wesley	M. G. Bourne, Algona
Lee	M. H. Archibald, Fort Madison	Sebastian Ambery, Keokuk	G. H. Ashline, Keokuk G. C. McGinnis, Fort Madison
Linn	W. K. Cooper, Cedar Rapids	J. D. Schuchmann, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	E. S. Groben, Columbus Junction	L. E. Weber, Jr., Wapello	E. S. Groben, Columbus Junction
Lucas	Dean Curtis, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	J. G. Lavender, George	S. H. Cook, Rock Rapids	A. C. Wubbena, Rock Rapids
Madison			J. E. Evans, Winterset
Mahaska	S. A. Smith, Oskaloosa	D. K. Campbell, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	C. R. Burroughs, Knoxville	A. D. Patterson, Knoxville	G. K. Van Zee, Pella
Marshall	R. H. Watt, Marshalltown	R. G. German, Marshalltown	R. C. Carpenter, Marshalltown
Mills	M. L. Scheffel, Malvern	R. K. Fryzek, Glenwood	M. L. Scheffel, Malvern
Mitchell	R. J. Smith, Stacyville	L. K. Lackore, St. Ansgar	T. E. Blong, Stacyville
Monona	L. A. Gaukel, Onawa	W. P. Garred, Onawa	L. A. Gaukel, Onawa
Monroe	H. J. Richter, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	S. R. Smith, Red Oak	H. C. Bastron, Red Oak	H. C. Bastron, Red Oak
Muscatine	R. E. Olson, Muscatine	K. E. Wilcox, Muscatine	K. E. Wilcox, Muscatine
O'Brien	L. J. Sweeney, Sanborn	A. D. Smith, Primghar	E. B. Getty, Primghar
Osceola	F. B. O'Leary, Sibley	T. J. Carroll, Sibley	T. J. Carroll, Sibley
Page	F. S. Sperry, Clarinda	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto			J. L. Coffey, Emmetsburg
Plymouth	L. A. George, Remsen	S. E. Lindell, LeMars	R. J. Fisch, LeMars
Pocahontas	J. B. Thielen, Fonda	C. J. Smith, Gilmore City	J. M. Rhodes, Pocahontas
Polk	R. B. Stickler, Des Moines	J. H. Dickens, Des Moines	J. G. Thomsen, Des Moines
Pottawattamie	F. E. Marsh, Jr., Council Bluffs	M. W. Kinney, Council Bluffs	G. H. Pester, Council Bluffs
Poweshiek	H. R. Light, Grinnell	J. H. Ransom, Grinnell	S. D. Porter, Grinnell
Sac	C. D. Gibson, Sac City	R. H. Miller, Sac City	J. W. Gauger, Early
Scott	W. S. Pheteplace, Davenport	K. H. McKay, Davenport	Erling Larson, Davenport
Shelby	L. V. Larsen, Harlan	C. V. Bisgard, Harlan	J. H. Spearing, Harlan
Sioux	C. B. Murphy, Alton	T. E. Kiernan, Sioux Center	M. O. Larson, Hawarden
Story	W. C. McCormack, Ames	R. R. Sprowell, Ames	J. D. Conner, Nevada
Tama	R. W. Linthacum, Dysart	A. J. Havlik, Tama	A. J. Havlik, Tama
Union-Taylor	R. H. Kuhl, Creston	W. A. Fisher, Creston	D. L. York, Creston (U) R. W. Boulden, Lenox (T)
Van Buren	K. Furumoto, Keosauqua	J. T. Worrell, Keosauqua	K. Furumoto, Keosauqua
Wapello	H. L. Wormhoudt, Ottumwa	R. P. Meyers, Ottumwa	L. J. Gugle, Ottumwa
Warren	amalgamated with Polk County		
Washington	E. J. Vosika, Washington	G. E. Montgomery, Washington	G. E. Montgomery, Washington
Wayne	K. A. Garber, Corydon	C. N. Hyatt, Corydon	C. N. Hyatt, Corydon
Webster	R. E. Drown, Fort Dodge	J. E. Reed, Fort Dodge	C. J. Baker, Fort Dodge
Winneshiek	F. F. Nelson, Decorah	T. F. Dynes, Decorah	E. F. Hagen, Decorah
Woodbury	H. E. Rudersdorf, Sioux City	C. T. Helseth, Sioux City	C. M. Marriott, Sioux City
Worth	B. H. Osten, Northwood	M. P. Allison, Northwood	C. T. Bergen, Northwood
Wright	R. F. McCool, Clarion	R. L. Gorrell, Clarion	C. P. Hawkins, Clarion

Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

IOWA MEDICAL SOCIETY

Organized in 1850

1966 ANNUAL MEETING

April 24-27

Hotel Fort Des Moines and Hotel Savery
Des Moines

Hotel Fort Des Moines

FRANK G. OBER, M.D.

President
Iowa Medical Society
1965-1966

GENERAL SESSIONS

Grand Ballroom—Hotel Fort Des Moines

Monday Morning, April 25

8:00 a.m. EXHIBITS

8:55 a.m. Invocation
Reverend E. W. Strauser, Burlington, Iowa, Rector, Christ Episcopal Church

A LOOK AT MEDICAL EDUCATION

A Panel Presented by the Iowa Medical Foundation

9:00 a.m. Melvin W. Breese, M.D., Portland, Oregon

"Responsibilities in Medical Education"

9:30 a.m. George A. Wolf, Jr., M.D., Boston, Massachusetts

"Can We Continue to 'Settle for Competence in the Present Sense?'"

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. William J. Grove, M.D., Chicago, Illinois

"Medical Education: Time for Change"

11:15 a.m. QUESTION & ANSWER SESSION
Doctor Breese
Doctor Wolf
Doctor Grove
Robert C. Hardin, M.D., Iowa City—Moderator

11:45 a.m. RECESS TO VISIT EXHIBITS

12:00 noon LUNCHEON PROGRAM

"The Future of Mass Communications, Radio and Television"

James C. Hagerty, New York, New York

Monday Afternoon, April 25

2:00 p.m. Frank G. Ober, M.D., Burlington, Iowa, President, Iowa Medical Society

President's Address

2:30 p.m. Erling Larson, Jr., M.D., Davenport, Iowa, and Edwin A. Motto, M.D., Davenport, Iowa

"Pre- and Postoperative Evaluation of the Surgical Patient"

3:00 p.m. RECESS TO VISIT EXHIBITS

3:45 p.m. ERSKINE MEMORIAL LECTURE

PANEL DISCUSSION: THYROID DISEASE

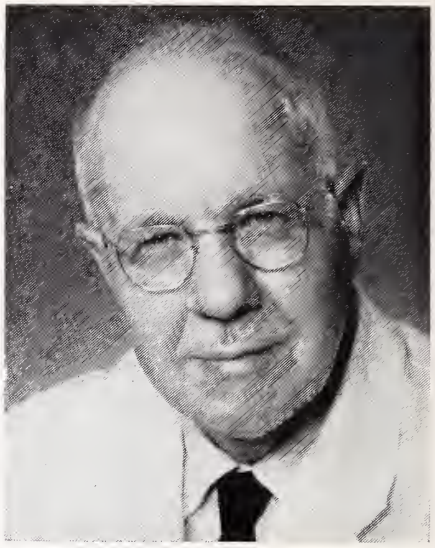
Surgery: John C. McClintock, M.D., Albany, New York—Moderator

Pathology: John B. Hazard, M.D., Cleveland, Ohio

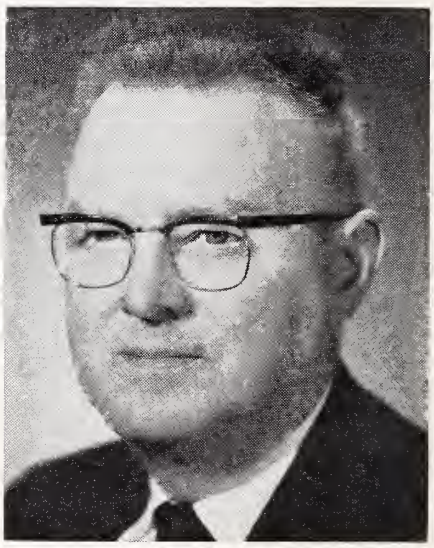
Internal Medicine: Elmer L. DeGowin, M.D.,, Iowa City, Iowa

Radioisotopes: Titus C. Evans, Ph.D., Iowa City, Iowa

This Program Is Acceptable for
6 ACCREDITED HOURS
by the
American Academy of General Practice



Melvin W. Breese, M.D., Portland, Oregon (left), member, Council on Medical Education, American Medical Association; assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School; member, Oregon Medical Association's Liaison Committee on Medical Education to the Faculty of the University of Oregon Medical School, and Oregon State Committee of the National Foundation for Medical Education; chairman, Internship Review Committee. **Francis C. Coleman, M.D., Tampa, Florida** (middle), immediate past-chairman, Council on Legislative Activities, American Medical Association; chairman, American Medical Political Action Committee; member, Board of Directors, American Association of Blood Banks, and American Board of Pathology. **Elmer L. DeGowin, M.D., Iowa City, Iowa** (right), professor of internal medicine, University of Iowa College of Medicine; governor for Iowa, American College of Physicians.



Titus C. Evans, Ph.D., Iowa City, Iowa (left), professor and head, Radiation Research Laboratory, and research professor of radiology, University of Iowa College of Medicine; member, National Bureau of Standards Committee on Radiation Protection, and Committee on Radiology, National Research Council; managing editor, RADIATION RESEARCH JOURNAL; associate editor, JOURNAL OF NUCLEAR MEDICINE. **Rubin H. Flocks, M.D., Iowa City, Iowa** (middle), professor and head, Department of Urology, and chief urologist, University Hospitals, University of Iowa College of Medicine; president, American Board of Urology; secretary, American Urological Association; member, National Research Council; National Advisory Cancer Council; Residency Review Committee, American Medical Association. **William J. Grove, M.D., Chicago, Illinois** (right), professor of surgery and associate dean, University of Illinois College of Medicine; committee member, Forum on Fundamental Surgical Problems, American College of Surgeons.

General Sessions (Continued)

Grand Ballroom—Hotel Fort Des Moines

Tuesday Morning, April 26

8:00 a.m. EXHIBITS

9:00 a.m. Joseph W. Kelso, M.D., Oklahoma City, Oklahoma

"Troublesome Problems in the Office of a Gynecologist"

9:30 a.m. Oscar P. Hampton, Jr., M.D., St. Louis, Missouri

"Basic Principles in the Management of Open Wounds"

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. Rubin H. Flocks, M.D., Iowa City, Iowa

"Office Urology"

11:15 a.m. John H. Moe, M.D., Minneapolis, Minnesota

"Office Orthopedics"

11:45 a.m. RECESS TO VISIT EXHIBITS

12:00 noon LUNCHEON PROGRAM

"Forensic Medicine in the U. S.—Need for Improvement"

Milton Helpern, M.D., New York, New York

Tuesday Afternoon, April 26

2:00 p.m. MEDICAL-LEGAL SYMPOSIUM

Frank G. Ober, M.D., Burlington, Iowa, President, Iowa Medical Society

Welcome and Introductions

2:10 p.m. Robert B. Throckmorton, LL.M., Des Moines, Iowa

"The Interprofessional Code"

2:30 p.m. Robert B. Murphy, LL.B., Madison, Wisconsin

"Personal Legal Planning for the Physician"

3:00 p.m. QUESTION & ANSWER SESSION

3:15 p.m. RECESS TO VISIT EXHIBITS

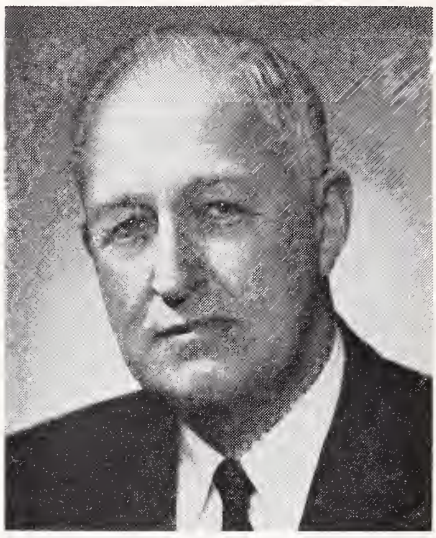
4:00 p.m. R. Crawford Morris, LL.B., Cleveland, Ohio

"Recent Landmark Decisions"

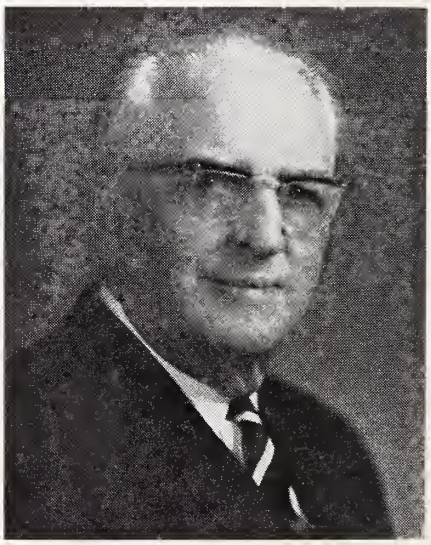
4:25 p.m. Francis C. Coleman, M.D., Tampa, Florida

"Legal Responsibilities of Physicians Under Federal Programs"

4:45 p.m. QUESTION & ANSWER SESSION



James C. Hagerty, New York, New York (left), vice-president, Corporate Relations, American Broadcasting-Paramount Theatres, Inc.; former correspondent and political reporter for the NEW YORK TIMES, and press secretary to President Eisenhower. **Oscar P. Hampton, Jr., M.D., St. Louis, Missouri** (middle), assistant professor of clinical orthopedic surgery, Washington University School of Medicine; chairman, Committee on Trauma, American College of Surgeons; member, Council on National Security, American Medical Association; past-president, American Association for the Surgery of Trauma. **Robert C. Hardin, M.D., Iowa City, Iowa** (right), dean of the College of Medicine, and vice-president for Medical Services, University of Iowa; member, Board of Directors, American Diabetes Association and Commission on Research, American Medical Association; consultant, Veterans Administration Hospitals, Des Moines and Iowa City, and Pathology and Allied Services, office of the Surgeon General, United States Army.



John B. Hazard, M.D., Cleveland, Ohio (left), chairman, Division of Pathology and head of department, Tissue Pathology, Cleveland Clinic Foundation; clinical professor of pathology, Western Reserve University School of Medicine; secretary, Section on Pathology, and Physiology, American Medical Association; member, Board of Directors, American Society of Clinical Pathologists, and Editorial Board, YEAR BOOK OF CANCER. **Milton Helpern, M.D., New York, New York** (middle), chief medical examiner, City of New York; professor and chairman, Department of Forensic Medicine, New York University Schools of Medicine; assistant professor of clinical medicine and lecturer in legal medicine, Cornell University Medical College; president, Society of Medical Jurisprudence. **Joseph W. Kelso, M.D., Oklahoma City, Oklahoma** (right), professor of gynecology and past-chairman, Department of Gynecology, University of Oklahoma School of Medicine; member, Board of Directors, Oklahoma Division, American Cancer Society.

Special Meetings and Dinners

Sunday, April 24

GOLF TOURNAMENT

The Annual Golf Tournament will be held at the Wakonda Club. Physicians may begin play at any time during the day, but the majority will start at 1 p.m. Dinner and awarding of prizes will follow. Reservations should be made with Harold J. McCoy, M.D., 212 Bankers Trust Building, Des Moines.

Monday, April 25

AMERICAN MEDICAL WOMEN'S ASSOCIATION, IOWA BRANCH 19

Members of the American Medical Women's Association, Iowa Branch 19, should register at the IMS Registration Desk at the Fort Des Moines Hotel. If a special meeting is arranged, specific details will be available at the Registration Desk.

IOWA ACADEMY OF SURGERY

Wakonda Club

Business Meeting: 5:00 p.m.

Social Hour: 6:30 p.m.—Dinner: 7:30 p.m.

Reservations: A. N. Smith, M.D.
1407 Woodland Avenue, Des Moines

IOWA ASSOCIATION OF PATHOLOGISTS AND IOWA SOCIETY OF MEDICAL TECHNOLOGISTS

Joint Study Seminar
1:30-4:30 p.m.

Business Meeting (IAP)
5:00 p.m.

Holiday Inn South

Social Hour: 6:30 p.m.—Dinner: 7:45 p.m.

Speaker: Mr. Emmett F. Butler, Newton, Iowa
Director of Public Relations, The Maytag Company

Cloud Room—Des Moines Municipal Airport

Reservations: C. H. Denser, M.D.
1073 Fifth Street, Des Moines

IOWA RADIOLOGICAL SOCIETY

Colonial Room—Des Moines Club

Social Hour: 6:00 p.m. Dinner: 7:15 p.m.

Reservations: L. L. Maher, M.D.
1419 Woodland Avenue, Des Moines

VISIT YOUR EXHIBITS

Hotel Fort Des Moines

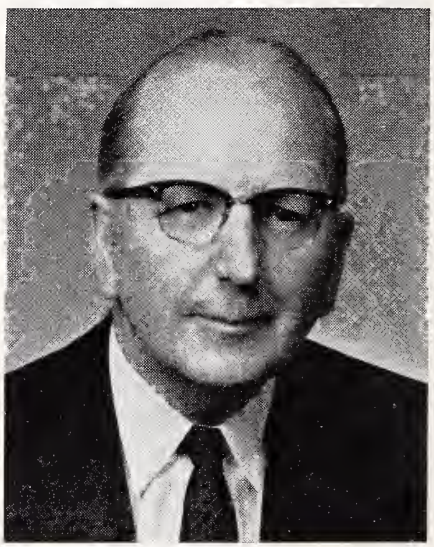
Technical Exhibits–Mezzanine Floor

HOURS

Monday, April 25—8 a.m. to 5 p.m.

Tuesday, April 26—8 a.m. to 5 p.m.

Erling Larson, Jr., M.D., Davenport, Iowa (left), private practitioner, internal medicine; member, Iowa State and National Boards of Governors, Arthritis Foundation, and Committees on Legislation and Interprofessional Activities, Iowa Medical Society. **John C. McClintock, M.D., Albany, New York** (middle), associate clinical professor of surgery and past-chairman, Medical Staff, Albany Medical Center Hospital; delegate, American Medical Association; recipient of the Distinguished Service Award, American Thyroid Association. **John H. Moe, M.D., Minneapolis, Minnesota** (right), professor and director, Division of Orthopedic Surgery, Department of Surgery, University of Minnesota Medical School; chief of staff, Gillette State Hospital for Crippled Children, St. Paul.



R. Crawford Morris, LL.B., Cleveland, Ohio (left), fellow, American College of Trial Lawyers; fellow and director, International Academy of Trial Lawyers; member, International Association of Insurance Counsel; partner, firm of Arter, Hadder, Wykoff and Van Duzer. **Edwin A. Motto, M.D., Davenport, Iowa** (middle), private practitioner, internal medicine; member of Executive Committee, Board of Directors, Iowa Heart Association. **Robert B. Murphy, LL.B., Madison, Wisconsin** (right), member, Bars of Supreme Courts of the United States and the State of Wisconsin, and U. S. Treasury and U. S. Tax Court; general counsel, State Medical Society of Wisconsin and Wisconsin State Dental Society; member, firm of Murphy, Stolper and Desmond.

Special Meetings and Dinners (Continued)

IOWA SOCIETY OF ANESTHESIOLOGISTS

Vic's Tally-Ho Restaurant
Social Hour: 5:30 p.m.—Dinner: 7:00 p.m.
Reservation Cards Will Be Mailed in
Advance of the Dinner

PAST PRESIDENTS' DINNER

Third Floor, Hotel Fort Des Moines—Room 340
Dinner: 7:00 p.m.

Tuesday, April 26

LEGISLATIVE CONTACT MEN

Terrace Room—Hotel Savery
Breakfast: 7:00 a.m.

RECEPTION FOR PHYSICIANS & LAWYERS

Third Floor—Hotel Fort Des Moines

Rooms 317-318

5:00-5:45 p.m.

PRESIDENT'S RECEPTION AND ANNUAL BANQUET

Hotel Fort Des Moines

Reception: 6:00 p.m.—North Room

Dinner: 7:00 p.m.—Grand Ballroom

BENEFIT DANCE

"Caduceus Capers"

Grand Ballroom—Hotel Fort Des Moines
8:30 p.m.

Don Hoy's Orchestra

Sponsored by the Woman's Auxiliary for the Benefit of Its Health Education Loan Fund.

Meetings of the

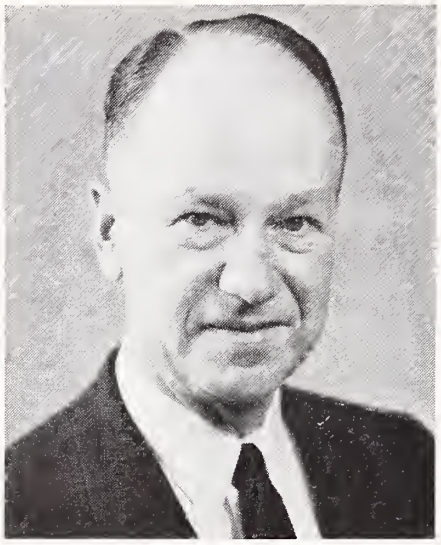
HOUSE OF DELEGATES

will be held in the

GRAND BALLROOM
HOTEL SAVERY

Sunday, April 24—9 a.m.
Wednesday, April 27—8 a.m.

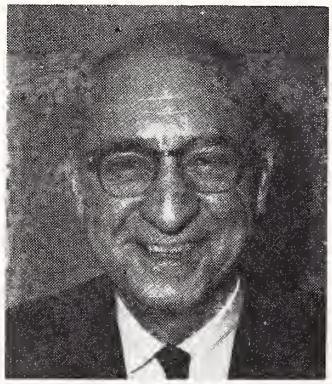
All IMS Members Are Welcome



Robert B. Throckmorton, LL.M., Des Moines, Iowa (left), legal counsel, Iowa Medical Society; member, American Law Institute; partner, firm of Dickinson, Throckmorton, Parker, Mannheimer and Raife. **George A. Wolf, Jr., M.D., Boston, Massachusetts** (right), executive director, Tufts-New England Medical Center, and vice-president for medical and dental affairs, Tufts University; chairman, Committee on Constitution and Bylaws, Association of American Medical Colleges; member, Steering Committee, AAMC Institute of International Medical Education, and General Research Support Advisory Committee, Department of Health, Education and Welfare, United States Public Health Service.

Program Committee

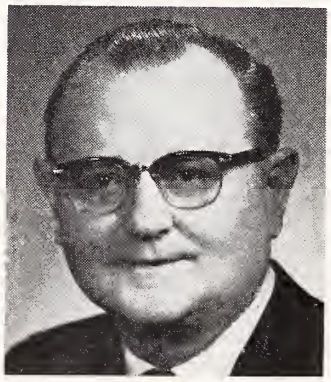
D. C. Wirtz, M.D.
Chairman



P. M. Cmeyla, M.D.

R. H. Flocks, M.D.

E. P. Russell, M.D.



C. H. Stark, M.D.

LUNCHEON PROGRAMS

Monday, April 25—12 O'Clock Noon

General Session

Grand Ballroom—Hotel Fort Des Moines

"THE FUTURE OF MASS COMMUNICATIONS, RADIO & TELEVISION"

Mr. James C. Hagerty
New York, New York

Mr. Hagerty served for 2½ years as Vice President in charge of News, Special Events and Public Affairs for the American Broadcasting Company, and was elected Vice President in charge of Corporate Relations for American Broadcasting-Paramount Theatres, Inc. in 1963. He formerly served as Press Secretary to President Eisenhower, and has had a distinguished career in the field of mass communications.

Tuesday, April 26—12 O'Clock Noon

General Session

Grand Ballroom—Hotel Fort Des Moines

"FORENSIC MEDICINE IN THE U. S.– NEED FOR IMPROVEMENT"

Milton Helpern, M.D.
New York, New York

Doctor Helpern, Chief Medical Examiner for the City of New York, will include in his discussion consideration of the responsibility for and the problem of the discovery of the unexpected in the frequently encountered mislabeled or unlabeled fatality, particularly the "'apparently" natural death.

Arrangements Will Be made for Dutch-Treat Luncheons During These Programs. Details Will Be Provided at a Later Date.

THE PRESIDENT'S RECEPTION
and
ANNUAL BANQUET

Tuesday, April 26—Hotel Fort Des Moines

PRESIDENT'S RECEPTION—6:00 p.m., North Room

(Blue Shield is arranging the reception in honor of Frank G. Ober, M.D., IMS President)

ANNUAL BANQUET—7:00 p.m., Grand Ballroom

Special Entertainment

featuring

The SUI Alumni Association's Famous

OLD GOLD SINGERS

in a

Festival of Song

Tickets Will be Sold at the Registration Desk, Hotel Fort Des Moines

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"CADUCEUS CAPERS"

Benefit Dance

for the

WOMAN'S AUXILIARY HEALTH EDUCATION LOAN FUND

Don Hoy's Orchestra

8:30-12:00

Grand Ballroom—Hotel Fort Des Moines

Tickets Will be Sold at the Registration Desk, Hotel Fort Des Moines

The House of Delegates

Open to All Members

First Meeting—Sunday
April 24, 9:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Approval of the Minutes of the Meeting held on April 14, 1965

Reports of Officers

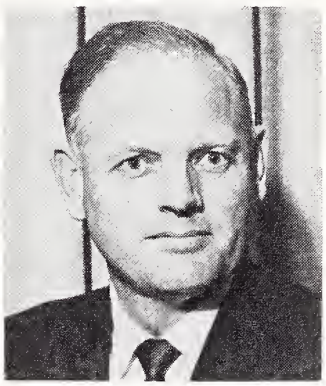
Nominations

Reports of Committee Chairmen

Memorials and Communications

New Business

SPEAKER



Paul M. Kersten, M.D.

Second Meeting—Wednesday
April 27, 8:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Reading of Minutes

Election of Officers

Reports of Committees

Unfinished Business

New Business

Adjournment

Take

A LOOK AT MEDICAL EDUCATION

A panel presented by
THE IOWA MEDICAL FOUNDATION

9 a.m.-11:45 a.m.
Monday, April 25—Grand Ballroom
Hotel Fort Des Moines

Attend

THE ERSKINE MEMORIAL LECTURE

3:45 p.m.—Monday, April 25
Grand Ballroom—Hotel Fort Des Moines

Panel Discussion: THYROID DISEASE

MEDICAL/LEGAL SYMPOSIUM

2 p.m.-5 p.m.
Tuesday, April 26

Grand Ballroom—Hotel Fort Des Moines

Members of the Iowa Bar Association Will Be Invited to This Session As Guests of the IMS.

A Social Function for Physicians & Lawyers will be held in Rooms 317-318 5:00-5:45 p.m.

Courtesy of The Prouty Company Administrator of Group Insurance Plans for the IMS

TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois

Americana Corporation, Beverly Hills, California

Astra Pharmaceutical Products, Inc., Worcester, Massachusetts

Automated Management Systems, Des Moines, Iowa

Ayerst Laboratories, Chicago, Illinois

Blue Cross-Blue Shield Plans, Des Moines-Sioux City

Carnation Company, Los Angeles, California

CIBA Pharmaceutical Company, Summit, New Jersey

Control-O-Fax Division, Latta's, Inc., Waterloo, Iowa

Des Moines Flying Service, Des Moines, Iowa

Dictaphone Corporation, New York, New York

Dome Chemicals Inc., New York, New York

Thomas A. Edison Industries, Des Moines, Iowa

Encyclopaedia Britannica, Inc., Chicago, Illinois

Geigy Pharmaceuticals, Yonkers, New York

Lazy M Shoes, Des Moines, Iowa

Lederle Laboratories, Pearl River, New York

Eli Lilly and Company, Indianapolis, Indiana

J. B. Lippincott Company, Philadelphia, Pennsylvania

Loma Linda Foods, Riverside, California

M and M Sales Company, Des Moines, Iowa

McNeil Laboratories, Fort Washington, Pennsylvania

Mead Johnson Laboratories, Evansville, Indiana

Medco Products, Waterloo, Iowa

The Medical Protective Company, Fort Wayne, Indiana

Merck Sharp & Dohme, West Point, Pennsylvania

Merrill Lynch, Pierce, Fenner & Smith, Inc., Des Moines, Iowa

Midwest Professional Building Contractors, Madison, Wisconsin

Monarch Life Insurance Company, Des Moines, Iowa

National Dairy Council, Des Moines, Iowa

ORTHO Pharmaceutical Corporation, Raritan, New Jersey

Parke, Davis & Company, Detroit, Michigan

Pepsi-Cola Bottlers of Iowa, Des Moines, Iowa

Physicians & Hospitals Supply Company, Minneapolis, Minnesota

Picker X-Ray, Midwest, Inc., Omaha, Nebraska

Professional Credit Control, Inc., Lincoln, Nebraska

Profexray, Incorporated, Des Moines, Iowa

The Prouty Company, Des Moines, Iowa

Roche Laboratories, Nutley, New Jersey

J. B. Roerig & Company, New York, New York

Sandoz Pharmaceuticals, Hanover, New Jersey

W. B. Saunders Company, Philadelphia, Pennsylvania

Schering Corporation, Union, New Jersey

G. D. Searle & Company, Chicago, Illinois

Siemens Medical of America Inc., Hinsdale, Illinois

Slaten Instrument Manufacturing Company, Milwaukee, Wisconsin

Smith, Miller & Patch, Inc., New York, New York

E. R. Squibb & Sons, New York, New York

Syntex Laboratories, Inc., Palo Alto, California

Thermolyne Corporation, Dubuque, Iowa

Ulmer Pharmacal Company, Minneapolis, Minnesota

The Upjohn Company, Kalamazoo, Michigan

U. S. Vitamin & Pharmaceutical Corporation, New York, New York

Warner-Chilcott Laboratories, Morris Plains, New Jersey

Westwood Pharmaceuticals, Buffalo, New York

Winthrop Laboratories, New York, New York

Scientific Articles

Hydrocephalus in Infancy: A Review

WILLIAM E. BELL, M.D.
Iowa City

DESPITE THE FACT that it has been recognized for centuries, the problem of hydrocephalus in infancy remains frustrating to the physician and disheartening to the parent. Considerable insight has evolved concerning the pathogenesis and pathology of this group of disorders, but our ability to recognize it promptly and to treat it remain far less satisfying than we could desire.

The term *hydrocephalus* does not refer to a specific diagnostic entity with a common lesion present in all cases. Rather, it denotes any of several conditions marked by the accumulation of excessive amounts of fluid within the ventricles, together with progressive ventricular enlargement caused by the pressure exerted by the contained fluid. Fluid under pressure, either currently or sometime in the past, is an integral part of the definition,[1] and thus those states in which ventricular enlargement has been secondary to cerebral atrophy are excluded.

The vast majority of cases of hydrocephalus in infancy result from obstructive processes along the cerebrospinal-fluid pathways. The obstruction may be within the ventricular system or external to it, and it may be of various pathologic types including developmental anomalies, neoplasms and adhesions secondary either to infection or hemorrhage. Often the cause is undetermined. Obstructive lesions within the ventricular system are likely to occur where the pathways are at their smallest caliber, including the foramen of Monro, the aqueduct of Sylvius and the fourth ventricle or outlet foramina. Extraventricular obstructions may occur at various places and prevent fluid from reaching the absorptive surfaces over the convexity of the brain.

In the following paragraphs, an attempt will be made to outline certain basic mechanisms, to describe the clinical syndromes and to review the technics currently available for treating hydrocephalus in infancy.

CEREBROSPINAL FLUID PHYSIOLOGY AND ANATOMY

An understanding of the clinical problems that are faced in infantile hydrocephalus demands a review of the physiology and developmental anatomy of the cerebrospinal fluid and its pathways. Dorothy Russell[2] has credited Vesalius (1514-64) with the first clear description of hydrocephalus, although the condition had been recognized much earlier. In 1761 Morgagni[3] confirmed the accumulation of fluid in the ventricles in hydrocephalus, and noted that it caused enlargement of the head in infants but not in adults. In 1825, Magendie[4] described the foramen now known by his name. Luschka[5] confirmed that discovery in 1855, and noted the existence of two lateral foramina. In 1875 classic work by the Swedish workers Key and Retzius[6] outlined the anatomy of the cerebrospinal fluid and fluid pathways. That study was followed in 1917 by that of Lewis Weed,[7] who studied the embryologic development of the cerebrospinal-fluid spaces in the pig and in man. He showed that in a pig embryo corresponding to a six-week human embryo, the fluid-containing tube is still closed posteriorly. At approximately that time the choroid plexus first appears, and by the eighth week the pressure of the fluid filtering through the roof of the fourth ventricle produces a complete dissection of the potential subarachnoid spaces and thus of the absorptive surfaces. Weed believed that if the roof of the fourth ventricle is not adequately permeable at this critical time, fluid will be held in the ventricular system and

Dr. Bell is an assistant professor in the Departments of Neurology and Pediatrics at the U. of I. College of Medicine.

that the subarachnoid spaces will not be dissected open. Thus, even if the outlet foramina in the posterior fossa eventually open, the absorptive surfaces will not have formed, and communicating hydrocephalus will result. Many people have given this explanation for the fact that infants with non-communicating hydrocephalus, as with congenital aqueductal obstruction, also have defects in absorption over the surface, or communicating hydrocephalus.

The site of cerebrospinal fluid (CSF) formation has puzzled investigators for years, and many possibilities have been suggested. Cushing[8] (1914) commented on the appearance of drops of clear fluid on the surface of the choroid plexus as he explored the lateral ventricle. Dandy[9] (1919) observed that surgical occlusion of one outlet foramen of the lateral ventricle resulted in distention of the lateral ventricle if the choroid plexus was left intact. Schaltenbrand and Putnam[10] (1927) injected fluorescein intravenously in animals, and observed the formation of greenish fluid on the choroid plexus. These studies led to the concept that CSF was formed by an active secretory process of the choroid plexus. However other researchers presented reasons why such might not be the case. Hassin[11] demonstrated iron-pigment granules in the epithelium of the choroid plexus following intraventricular hemorrhage, and postulated that the plexuses are concerned with removal of certain waste products from the CSF. Recent studies utilizing radioactive isotopes[12] have indicated that different components enter the CSF at different rates and by various mechanisms. Certain substances, such as protein and electrolytes (especially sodium), are actively secreted by the choroid plexuses. Some substances pass into the fluid by diffusion from the plasma across the membranes (including the ependyma) which line the CSF-containing spaces. Here the rate of entry appears to be related to particle size. Water can enter and leave the system freely at all points and with great rapidity.

The sites and mechanisms of absorption of cerebrospinal fluid have remained somewhat less clear. In 1913, Dandy and Blackfan[13] using phenosulfonphthalein (PSP) dye, formed the opinion that absorption of the fluid took place diffusely through the veins of the subarachnoid space. Dandy[14] later estimated that approximately three-fourths to four-fifths of the fluid is absorbed from the cranial subarachnoid spaces, and that the remainder is absorbed from the spinal subarachnoid spaces. Dandy's early studies were followed by Weed's[15] suggestion that the fluid was absorbed by the arachnoid villi. In 1960 Bowsher[12] summarized the available data and suggested that some absorption occurs in the ventricles across the ependyma. Additional absorption in the cranial cavity occurs across the subarachnoid membrane into the vascular system, and in the spinal region through perineural spaces into the lymphatics. In a recent monograph, Cooper[16] has emphasized the absorptive capabilities of the spinal subarachnoid space. This area may be more vital in maintaining a balance between cerebrospinal-fluid formation and absorption than previous investigations have suggested.

CLASSIFICATION AND PATHOLOGIC TYPES

Theoretically, as has been stated many times, hydrocephalus can occur because of an excessive production of cerebrospinal fluid, an obstruction to its flow, or a defect at the site of absorption. The rather rare papilloma of the choroid plexus provides an example of ventricular enlargement resulting from an overproduction of fluid. Presumably, the rate of formation of cerebrospinal fluid exceeds the available facilities for absorption, and increased pressure results.

As to the third postulated mechanism, that of primary disturbance of the absorptive surfaces, considerable doubt still exists. Theoretically, the possibility of such a defect seems attractive, but actual pathologic demonstration remains scanty. This leaves obstruction at some point along the pathways as the overwhelmingly prominent explanation for the majority of cases of hydrocephalus in infancy. Conventionally, we speak of patients with intraventricular obstruction as having non-communicating hydrocephalus, and those with extraventricular obstruction as having communicating hydrocephalus. The old terms *internal* and *external* hydrocephalus are infrequently used nowadays, and seem inapplicable. A practical classification might be as follows:

A. Non-communicating hydrocephalus (implying a lack of communication between the ventricular system and the cervical subarachnoid space)
   1. Maldevelopments
      Aqueduct of Sylvius
      -stenosis
      -forking ("atresia")
      -septum
      Arnold-Chiari malformation with obstruction
      Outlet foramina of fourth ventricle (Dandy-Walker syndrome)
   2. Gliosis of the aqueduct
   3. Inflammation (as with fourth-ventricle or outlet-foramina adhesions secondary to infection)
   4. Neoplasm, cyst or hematoma

B. Communicating hydrocephalus (implying communication between fourth ventricle and cervical subarachnoid space)
   1. Post-meningitic, post-hemorrhagic, or developmental adhesions of basilar cisterns or cisterna ambiens
   2. Communicating hydrocephalus with the Arnold-Chiari malformation
   3. Papilloma of the choroid plexus
   4. Cranial subarachnoid absorptive defect (not pathologically proved)
   5. Hypovitaminosis A (in experimental animals)

It becomes apparent, then, that in the majority of instances an obstructive process is the common denominator of infantile hydrocephalus. Secondary to the limitation of fluid movement, there occurs an increase in the intraventricular pressure. From a structural standpoint this is followed by a progressive thinning of the cerebral white matter. The increased surface area available for absorption, as the ventricles dilate, may partially account for the decreasing intraventricular pressure sometimes recorded in advanced but still progressive hydrocephalus. An important point that possibly explains the occasional preservation of intellectual and adaptive behavior in such patients is the remarkable lack of significant alterations in the cerebral cortical structure itself, even with advanced white matter attenuation. The relative sparing of cerebral cortex and deep nuclear gray matter, as opposed to the rapid loss of white matter, has been attributed to the more plentiful blood supply to the more metabolically active gray matter of the nervous system.[12]

Adams *et al.*,[17] have recently reviewed the relationship of intraventricular pressure and ventricular size. They suggest that the significance of the pressure determination varies with the size of the ventricles. Since the force exerted on the ventricular walls is the product of pressure times area, a given pressure may be considerably more damaging in dilated ventricles than in a ventricular system of normal size. This observation may suggest a need for reconsideration of our usual criteria for what is normal as regards CSF pressure.

A matter long of interest concerns what substance is actually lost from the brain as the ventricles enlarge. It is well known that after successful shunting procedures the ventricular size often again becomes smaller. This indeed suggests regrowth of some portion of the cerebral mantle. Fishman and Greer[18] studied the problem with dogs that had been made hydrocephalic by intracisternal injection of kaolin. No changes occurred in the composition of the cortex, but the white matter demonstrated an increased content of water, and a decrease in lipid and protein composition. Loss of intracellular potassium from the white matter was also found. The question thus arises as to whether these changes represent pressure atrophy of myelin components early in hydrocephalus. Electron microscopic examination of the brain might eventually help to resolve this issue. The absolute relation between pressure and progressive ventricular enlargement in hydrocephalus remains a problem for additional investigation as well. Bering[19] has suggested that a force arising from the pulsation of the choroid plexus vasculature may be an important factor in this regard.

As to the site of disease, the aqueduct is the most commonly demonstrated area of obstruction. Stenosis of the aqueduct is probably a rare cause of hydrocephalus. The term *stenosis* here implies an ependymal-lined and structurally normal-appearing aqueduct having an abnormally small diameter. Although probably not a common cause of rapidly progressive hydrocephalus in infancy, it may account for certain cases in which a delicate balance is reached and the individual is asymptomatic until his mid-teens or even adulthood. Such cases have been referred to as "occult" hydrocephalus[20] and may remain latent for many years. Then mild head trauma or a systemic infectious illness may render the system inadequate and result in overt symptoms. Findings include headaches, nausea, vomiting and papilledema. In addition, some patients will also show a truncal ataxia that leads the physician toward an erroneous diagnosis of posterior-fossa tumor.

A lesion more commonly found in the aqueduct is atresia or forking characterized by multiple channels, often not communicating with one another and separated by fairly normal neural tissue. Atresia of the aqueduct may occur as an isolated anomaly, or it may be associated with other defects such as the Arnold-Chiari malformation and meningomyelocele.

Gliosis of the aqueduct is the other form of histologic change. Proliferation of subependymal glia is the cardinal pathologic finding in this process. Fibrillary glial tissue within the lumen of the aqueduct or ependymal granulations may also be found. The pathogenesis of this fibrillary glial overgrowth remains unclear. Whether it represents a developmental or acquired anomaly is not yet established. Many attempts to account for aqueductal gliosis on the basis of pre-existing infection or inflammation have not been supported either clinically or pathologically. That aqueductal gliosis and forking may occasionally be related etiologically is suggested by the case described by Drachman and Richardson[21] in which both were found at different levels of the same aqueduct. That some forms of aqueductal disease producing hydrocephalus may be transmitted via a sex-linked recessive mode of inheritance was suggested by Bickers and Adams[22] in 1949. Subsequently, other cases[23, 24] have been described as sex-linked hydrocephalus. Except for this small group, the etiology of congenital hydrocephalus is not usually demonstrated.

Mention has been made of the fact that aqueductal lesions can, on occasion, account for hydrocephalus with the Arnold-Chiari malformation. This is true in some instances. However hydrocephalus with this anomaly may be either noncommunicating or communicating. It is of interest that hydrocephalus with meningomyelocele and associated Arnold-Chiari malformation is likely to be present extremely early in life. Marked ventricular enlargement often can be demonstrated by air studies, even without any or with only a

Figure 1. Ventriculogram of a four week old infant with lumbosacral meningomyelocele, hydrocephalus, luckenschadel skull and presumably Arnold-Chiari malformation (not proved). There is advanced ventricular enlargement with only mild head enlargement. Dye studies and other films revealed the hydrocephalus to be of the communicating type.

mild increase in head circumference (Figure 1). Credit is given to Arnold[25] and to Chiari[26, 27] for the early descriptions of this disorder, and in 1907 the designation *Arnold-Chiari malformation* was proposed for it by Schwalbe and Gredig.[28] It is of interest that Cleland,[29] of Glasgow, had demonstrated many of the anatomic features of the anomaly in 1883, some eight years prior to Chiari's first report. This malformation is usually found in children with low spinal defects such as meningomyelocele. The essential components of the anomaly consist of elongation of the brain stem and a beak-like deformity of the quadrigeminal plate.[30, 31] Because of the elongation of the pons and medulla, the latter is characteristically below the level of the foramen magnum. The lower cranial nerves ascend to reach their foramina of exit, as do the upper cervical nerves. The medulla and upper cervical cord are kinked, and a tongue of cerebellar tissue extending through the foramen magnum is bound down to the dorsal and lateral surfaces of the medulla by adhesions. The cerebellar tissue displaced downward consists of the posterior vermis (pyramis, uvula, nodulus) and not the tonsils, which herniate with increased intracranial pressure.

Other abnormalities frequently seen with the Arnold-Chiari malformation include hydromyelia of the cervical cord and, at times, enlargement of the cervical segments. Heterotopic gray matter may be present in the cerebral white matter, and microgyria is often noted. In addition, Cameron[32] described thickening of the interthalamic connections, partial obliteration of the cerebral longitudinal fissure and hypoplasia of the cerebral falx. The volume of the posterior fossa is small, and the tentorium is attached well below the external occipital protuberance, carrying with it the transverse sinus. The impaction of cerebellar and medullary tissue through the foramen magnum may permit communication from the fourth ventricle, yet prevent the fluid from reaching the absorptive surfaces over the hemispheres. Ventriculography would demonstrate a communicating hydrocephalus in such a case.

The frequent association of this particular hind-brain anomaly with the various forms of spina bifida cystica led Lichtenstein[33] to propose traction as a causative factor. Lichtenstein[34] also postulated that the aqueductal narrowing frequently seen in these cases was due to longitudinal elongation of the brain stem resulting from this traction phenomenon. It was suggested that because of fixation at the site of the low spinal defect, the usual "ascent" of the spinal cord relative to the vertebral column could not occur. The result would be a distortion of the hind-brain structures, with elongation and even herniation through the foramen magnum.

Subsequent studies, however, have cast serious doubt on the "traction" theory. Many of the features such as the remarkable beaking, with fusion of the colliculi as well as the cerebral and cortical disturbances, could not be the result of traction. Barry *et al.*,[35] by studying human fetuses with myeloschisis, have added rather conclusive data detracting from this theory. Fetuses estimated at approximately 18 weeks were described as already showing features of the Arnold-Chiari malformation. These early findings, before the occurrence of any significant shortening of the cord relative to the vertebral column, seem to eliminate traction as an explanation. Barry, and Murakami,[36] in Nagoya, have suggested that the malformation results from neural overgrowth consistent with the finding of tissue enlargement in certain areas. Recently reported cases[37, 38] of the Arnold-Chiari malformation with no vertebral or spinal cord anomalies have added further evidence against the traction theory.

The other postulated mechanism is that the Arnold-Chiari malformation is secondary to hydrocephalus with pressure exerted from above. This postulate suggests that the hind-brain structures along with the transverse sinuses are pushed downward because of the hydrocephalus above. Difficulty is encountered in explaining many of the features of the anomaly on this basis. Also, the fact that the Arnold-Chiari malformation may occur without hydrocephalus reduces the likelihood of this explanation. Daniel and Strich[31] compared the beaked tectum in this anomaly with the ap-

pearance seen normally in embryonic development. They suggested that the Arnold-Chiari malformation has its origin in early embryonic life. Failure of the pontine flexure to form as it normally does, at about the sixth fetal week, was postulated to account for elongation of the brain stem. Peach[39] also has provided evidence indicating a strong possibility that the Arnold-Chiari malformation results from developmental arrest, with failure of formation of the pontine flexure early in intrauterine life. This seems the most compatible explanation for all the morphologic features of this anomaly, but we still have no clear insight as to the etiology of the developmental arrest itself.

Controversy has likewise centered around whether the Dandy-Walker syndrome is a developmental defect or an acquired disorder. Since Dandy's[40] description in 1921, the syndrome has been referred to as "congenital atresia of the foramina of Luschka and Magendie,"[41] or at times, "atresia of the foramen of Magendie."[42] The latter terminologies reflect Dandy's belief that failure of resorption of the membranes in the posterior fossa has prevented the development of patency of the fourth ventricle outlet foramina. Prenatal obstruction at this site then results in cystic dilatation of the fourth ventricle, with pressure atrophy of the posterior vermis of the cerebellum and separation of the cerebellar hemispheres. Others, including Benda,[43] have stressed the primary developmental features, believing that the cerebellar defect belongs in the category of cleft formation or rachischisis, and is not simply the result of pressure atrophy. Air injected into the lumbar subarachnoid space, in children with this disorder, will occasionally gain entrance into the lateral ventricles. This fact has been used in arguments against the "obstruction" theory. However, it would seem to bear little significance, since patency of the outlet foramina could have developed postnatally, after the damage had been done.

Additional investigation is clearly needed before the pathogenesis can be established. Until it is, it would seem wise for us to refer to the disorder as the Dandy-Walker syndrome rather than as congenital atresia of the foramen of Magendie, thus avoiding the erroneous implication that the basic mechanism is known beyond doubt.

Certain clinical features usually allow one to suspect this diagnosis. The associated hydrocephalus is commonly much more slowly progressive than it is in the other forms seen in infancy. Some children may reach the age of 10 or 15 years before abnormalities are noted. The enlargement of the head is most prominent from the ears back to the occiput. The occipital region is elongated directly posterior to the posterior cervical region, giving the head a "shelf-like" appearance when one inspects it from the lateral position. Skull x-rays[44] are likely to show some generalized head

Figure 2. Lateral skull x-ray of a child with Dandy-Walker syndrome. There is mild head enlargement with marked increase in the volume of the posterior fossa. The position of the transverse sinus is abnormally high. Thinning of the occipital bone is present, with early separation of the lambdoidal sutures.

enlargement, but outstanding enlargement of the posterior fossa is present, with thinning of the occipital bones on the lateral view (Figure 2). The lambdoidal sutures, which may show less tendency to spread in the usual types of infantile hydrocephalus, are apt to be disproportionately separated here. Cystic dilatation of the fourth ventricle prevents the normal prenatal downward migration of the transverse sinus. The abnormally high position of the transverse sinus groove also may be visualized roentgenographically. Matson[45] has used superior sagittal sinography further to identify the abnormal position of these vascular structures. On transillumination of the head in infants with this disorder, an abnormal glow appears in the occipital region but not elsewhere. The importance of recognizing this disorder cannot be overstressed, since it may be remediable surgically, and since sudden death may occur in childhood or early adulthood if the condition goes unrecognized.

It would seem appropriate to mention hydranencephaly, although its relationship to the group of disorders under discussion remains questionable. Cruveilhier[46] is said to have been first to describe this condition, although the term *hydranencephaly* was first used by Spielmeyer.[47] The cause is not usually apparent, but it seems likely that most cases result either from a devastating intrauterine encephaloclastic process or from a primary disturbance in differentiation of the neural tube early in intrauterine life, as Yakovlev and Wads-

Figure 3. Hydranencephaly. Intracranial air injection (blow-up lateral exposure) demonstrates virtual absence of hemisphere tissue, with air opposing the undersurface of dura and skull.

Figure 4. Hydranencephaly. Hanging-head lateral view. Middle fossa appears air-filled.

worth[48] have suggested. It remains unclear whether some cases represent the end-point of extreme congenital hydrocephalus. Virtually total absence of the cerebral mantle is noted on pathologic examination. The basal ganglia and brain stem are usually found to be grossly intact. In place of the hemispheres, one finds huge, fluid-filled chambers surrounded by meninges. There is often a thin, gliotic rim of tissue adjacent to the meninges, which apparently represents remnants of the destroyed hemispheres. At birth the hydranencephalic child may have a normal head circumference, or at times an enlarged head, but then enlargement occurs at an abnormal rate. Clinical examination may reveal no differences from the more common types of infantile hydrocephalus, for infants with hydranencephaly often suck well, show the usual neonatal reflexes, and seem to cry appropriately.

If any clinical finding differentiates this problem, it is the evidence of advanced spasticity at an early stage of the disorder. The diagnosis can be established by transillumination[49] which produces a bright red glow over wide areas of the calvarium, interrupted by black stripes cast by the wider vascular structures such as the superior sagittal sinus. Electroencephalography[50, 51] is likely to show flat tracings from all leads. The fluid from the dilated chambers may be either clear or mildly to moderately xanthochromic.

Ventriculography (Figures 3 and 4) demonstrates an absence of cerebral-hemisphere tissue. The term *ventriculography,* in this instance, refers to transfontanel injection of air. However, whether the spaces filled with air in all such cases actually represent the lateral ventricles remains doubtful. Indeed Poser *et al.*[52] showed in one case of hydranencephaly that pneumoencephalography outlined a rudimentary ventricular system which was not in communication with the large, fluid-filled spaces above. Carotid angiography on the same child revealed a vascular pattern "in miniature," restricted to a relatively small area at the base of the skull. This case would seem to be an example of hydranencephaly with cerebral hypoplasia, and probably represents an uncommon form of this disorder. In many cases, the large chambers do represent the ventricular system, and on occasion aqueductal obstruction is present.

Alvord[53] has described a hydranencephalic infant with aqueductal forking. Such cases suggest the possibility that some instances of this condition, under certain circumstances, may be the result of extreme congenital hydrocephalus. Other etiologies suggested in the past have included bilateral involvement of the internal carotid arteries, cerebral venous occlusions, and prenatal infection. As indicated earlier, it would seem likely that

hydranencephaly is a syndrome which may have multiple causes and variable pathologies. The prognosis for these infants is extremely poor, and death usually occurs in the early months of life.

CLINICAL PICTURE AND DIAGNOSTIC APPROACH

There are considerable variations in the time of appearance and in the degree of clinical manifestations in infants with hydrocephalus. Abnormal head enlargement may be evident at the time of birth, or more often the child is several weeks or even months of age before any abnormality is noted. As the process progresses, the disproportion between head size and facial structures or chest circumference becomes more evident. Dilatation of scalp veins occurs, and distortion of the orbital structures results in the familiar "setting-sun" sign of hydrocephalus. Various types of abnormal eye movements may occur, including conjugate-gaze disturbances, random eye movements and nystagmus. With long-standing hydrocephalus, optic atrophy may develop. Tenseness of the enlarged anterior fontanel, even when the child is relaxed and in the upright position, reflects the increased intracranial pressure.

Except for signs pertaining directly to the head, the most characteristic feature of a hydrocephalic baby is irritability. Vomiting commonly occurs, but not necessarily. The so-called "cerebral cry" with a high-pitched, shrill quality may be noted, but is a late sign. Delay in motor skills usually becomes apparent, and examination demonstrates varying degrees of tone abnormalities, including hypertonicity and hyperreflexia in the lower extremities. Yakovlev[54] has suggested that spasticity in the lower extremities of hydrocephalic infants may be the result of stretching of fibers arising in the parasagittal area, which then must pass over the ventricle to enter the internal capsule and eventually to supply the lowers. With progressive ventricular enlargement such fibers would be involved earlier than the descending fibers to the upper limbs, which arise more laterally on the motor strip. There can be a persistence or reappearance of certain neonatal reflexes such as the grasp, Moro or tonic neck reflexes.

Despite increased intracranial pressure, papilledema is rare in infantile hydrocephalus. Its presence in a child with an abnormally enlarged head suggests the possibility of another process such as choroid-plexus papilloma, posterior-fossa tumor or subdural hematoma. It is extremely important to differentiate the latter from hydrocephalus, and superficially the two may be quite similar in appearance. A history of head trauma, a history of convulsions, the existence of anemia, or the presence of retinal hemorrhages all suggest the possibility of a subdural hematoma. Occasionally, a child with a subdural hematoma will have a characteristic head shape. There is generalized enlargement, but a striking increase in the biparietal diameter resulting in a triangular appearance of the head when it is viewed downward at the vertex. In the final analysis, subdural taps substantiate or exclude the diagnosis of subdural hematoma. Rapid and abnormal head enlargement becoming manifest after six months of age must be viewed with considerable caution from the diagnostic standpoint. Posterior-fossa tumor in the older infant may produce few objective signs other than head enlargement. It is precisely the ability of the head to enlarge that masks the usual tell-tale findings of such a lesion. Signs of ataxia may remain subtle before the tottling age, and the infant may show little more than non-specific delay in developing motor skills.

In certain instances the head may be enlarged because the brain is abnormally large—a state referred to as megalencephaly. This can occur with certain recognizable clinical conditions such as Tay-Sach's disease[55] or with achondroplasia.[56] Abnormal head enlargement may occur with various leukodystrophies, including spongy degeneration (Canavan)[57] and Alexander's disease.[58] It can occur also as a congenital malformation in and of itself, but it is often associated with other malformations, including anomalies of the facial structures or external ears. Infants with excessively heavy brains usually do not show distended scalp veins or bulging fontanels. Skull x-rays are less likely to show suture separation. When the differentiation cannot be made clinically, either ventricular tap, with measurement of the cerebral mantle thickness, or air studies are necessary.

Abnormal head enlargement in infancy may occur with osteopetrosis[59] or Albers-Schonberg's disease. The increased bone density and thickness may partially account for the head enlargement, but hydrocephalus may be present. Though the diagnosis is established by skull x-rays, it can be suspected clinically in an infant with an enlarged head circumference, anemia, hepatosplenomegaly and various cranial-nerve deficits. Optic atrophy, facial-nerve paresis and deafness are the most common.

One must also recall that premature infants as compared with full term babies may show seemingly disproportionate growth of the head. Thus, certain small premature infants, although normal, may be suspected of hydrocephalus because of the disproportion between their head size and their chest or total body size. Such a baby is apt to have a long scaphocephalic head shape, but no venous distention, fontanel tension, irritability or vomiting.

A dilemma rather frequently encountered clinically concerns the child a few months of age whose head is only slightly large either for linear length or chronological age. Whereas early diagnosis is important when hydrocephalus actually exists, an overly enthusiastic approach and a multitude of diagnostic studies may be more harm-

ful than permitting the process to proceed for a few weeks. Many such babies with marginal head measurements turn out to have no disease whatever, but are only manifesting a familial trait—that of having a slightly large, but normal head. A wise approach in this situation is to obtain skull x-rays on the initial visit and to follow the child with serial head measurements at weekly intervals. If it then becomes apparent that the rate of head growth is clearly abnormal, additional studies are indicated. The normal infant's head should not grow more than 2.5 cm. in each of the first two months, and considerably less in each of the months that follow.

The objective of the clinical approach to the problem of hydrocephalus in infancy is to establish the nature and site of the pathology with as little trauma to the child as possible. Skull x-rays should be obtained, and an adequate funduscopic examination is valuable. Macular chorioretinitis in a hydrocephalic infant suggests toxoplasmosis, and warrants dye studies on both mother and child. This is especially true if diffuse intracerebral calcification is seen on x-ray. However, the combination of hydrocephalus and chorioretinitis in an infant is not invariably the result of toxoplasmic infection,[60] and one must be guided by the dye studies in establishing or ruling out this diagnosis.

Transillumination of the skull[61] is a harmless procedure and at times provides further information, even before air-contrast studies. In a totally darkened room, a bright light with a soft rubber adapter is placed flush against the head. If the cerebral mantle has a thickness of less than one centimeter, a bright glow will occur, with considerable diffusion of the redness away from the site of the light. It is valuable principally in hydranencephalic infants, where the transillumination findings are virtually diagnostic. Subdural hematomas do not produce abnormal transillumination findings, but subdural effusions are quite apt to do so.

More specific studies to delineate the anatomic site of disease include ventricular tap, phenolsulfonphthalein (PSP) dye studies and ventriculography. To what degree the ventricular enlargement has progressed can be determined by passage of a needle through the lateral angle of the anterior fontanel into the ventricle. An accurate pressure determination is important, but can be obtained only after the infant has settled down and has stopped crying. If desired, the dye test can then be done at this same time by injecting 1 cc. (6 mg.) of neutral PSP dye (or indigo carmine) into the ventricle. Prior to its injection, fluid specimens are obtained for cell count, protein, glucose and culture. The purpose of the PSP dye test is to distinguish non-communicating from communicating hydrocephalus, for this may determine which type of therapeutic approach is most applicable. Lumbar puncture 20 minutes after injection of the dye into the ventricle will show no dye if the hydrocephalus is non-communicating. In communicating hydrocephalus, dye will be apparent in the lumbar fluid at this time.

An extension of the dye test includes collection of all urine for 12 hours after the injection. The percentage of dye excreted during this period is then determined by the laboratory. In the normal child, 50 per cent or more of the dye will be excreted in a 12-hour period. In communicating hydrocephalus, 10-30 per cent excretion is expected, and in the non-communicating type less than 10 per cent is excreted.

Although at times it is helpful, the PSP dye test is of questionable value for routine use. While PSP dye studies are clearly of value from the standpoint of distinguishing non-communicating from communicating hydrocephalus, the unpredictable dilutional factor associated with variations of ventricular capacity makes them less reliable as an indicator of the state of the absorption mechanism.[62]

Some have advocated simultaneous ventricular tap and lumbar puncture[1] to differentiate non-communicating from communicating hydrocephalus. With the baby lying on its side and relaxed, simultaneous pressure measurements above and below should be the same in communicating hydrocephalus. Also, jugular compression can be expected to produce equal changes in the two manometers if communication exists. With intraventricular obstruction the composition of the fluid, especially as regards protein and cell count, may vary in the two locations. However, caution must be taken in such an evaluation. In general, air ventriculography is a more reliable indicator of the presence or absence of intraventricular obstruction, besides providing other needed information. One can expect to learn the approximate size of the ventricular system, the presence or absence of intraventricular neoplasm, and the site of obstruction, if present, from skillful ventriculography.

In addition to air ventriculography, positive contrast ventriculography is also occasionally useful. This procedure may be indicated when studies suggest an obstruction but when the precise site cannot otherwise be demonstrated. One cubic centimeter of Pantopaque is injected into the lateral ventricle, and under fluoroscopic control it is carried into the region of the posterior third ventricle. With aqueductal obstruction, a tapering is often seen in the initial portion of the aqueduct, with obstruction to its further flow. If one is concerned, in an infant, about the possibility of aqueductal distortion due to a posterior-fossa tumor, positive-contrast ventriculography may be an invaluable aid. Combined Pantopaque-air ventriculography[63] has also been recommended as a diagnostic tool to establish the absolute site of obstruction in non-communicating hydrocephalus.

Although the disadvantages are evident, a possible advantage in the use of a small amount of Pantopaque is that after surgical therapy an estimate of cerebral-mantle thickness can be ascertained by means of follow-up x-rays with the head in various positions.

TREATMENT AND COMPLICATIONS OF TREATMENT

The indications for and expectations from surgical therapy for hydrocephalus in infancy must be weighed against the predicted natural history of the disorder. Laurence[64] was able to study 182 unoperated cases collected over a 20-year period, and found that 89 (49 per cent) had died. Eighty-one (46 per cent) were alive and had developed spontaneous arrest of the process. Nine other patients were living with progressive hydrocephalus. Of the arrested survivors, 73 per cent were found to have IQ's greater than 50, and 38 per cent had IQ's of 85 or more. Yashon's[65] series of non-operated cases showed approximately the same spontaneous-arrest rate. That surgical therapy can offer more than the natural course is suggested by certain series, especially of patients with ventriculo-vascular shunts, where a "success" rate of approximately 70 per cent has been reported (Yashon,[65] Russell,[66] Pudenz[67]).

A surgical attempt to alter the physiologic properties of cerebrospinal-fluid formation without the use of a prosthesis was made by Dandy,[68] in 1918, when he removed the choroid plexus from the lateral ventricles in communicating hydrocephalus. Following the first four such operations, three patients died immediately due to collapse of the cerebral mantle. Then in 1922, he attempted endoscopic cauterization of the choroid plexus,[69] but subsequently discarded that procedure. Putnam[70] and later Scarff[71] demonstrated that endoscopic destruction of the choroid plexus could be valuable and could be accomplished safely. Scarff[72] has recently published the results he has accumulated over many years with the so-called "physiologic" operative procedures—choroid plexectomy and third ventriculostomy. He suggests that his results closely correspond to those in which foreign materials such as shunt tubes are utilized, and he feels that reconsideration should be given to these procedures. It is clear, however, that a procedure perfected by one operator may be less satisfactory for another surgeon, and that good results may sometimes be attributable to the surgeon's long years of technical experience with that particular operation.

Since its introduction in 1939, the Torkildsen procedure,[73] or ventriculocisternostomy, has been the most accepted by-pass operation for acquired posterior-fossa obstruction in older children and adults. Its major drawback is its magnitude, since a posterior-fossa craniectomy is required. In infants with aqueductal stenosis or atresia, the Torkildsen by-pass may only convert a non-communicating to a communicating type of hydrocephalus, thus failing to provide a solution. Which baby will respond in this fashion cannot be predicted prior to surgery, and consequently the usefulness of this form of shunt is limited in infantile hydrocephalus.

Shunts from the ventricle to the pleural cavity have recently been popular in certain centers, but the procedure was utilized as early as 1914 by Heile.[74] In 1954, Ransohoff[75] performed ventriculopleural shunts on six patients having neoplasms, with no operative mortality and with arrest of the hydrocephalus in all of them, at least for a brief follow-up period. He has found the procedure useful for both non-communicating and communicating hydrocephalus as well as in cases of posterior-fossa obstruction due to neoplasm. Further studies[76] from the same center describe 83 hydrocephalic infants treated with this procedure and followed for not less than one year. Three postoperative deaths due to intracranial bleeding occurred. The hydrocephalus was arrested in 65 per cent. Except for the bleeding described above, the complications included obstruction of the ventricular end of the tube, and an occasional instance of initial difficulty with absorption of the fluid from the pleural cavity requiring thoracentesis.

The peritoneal cavity has been a popular site for shunt procedures, both from the ventricle for non-communicating hydrocephalus and from the lumbar subarachnoid space for communicating hydrocephalus. Jackson and Snodgrass,[77] in 1955, described their experience with peritoneal shunts in 62 patients. Hydrocephalus was arrested in only 30 per cent, and because of a strong tendency for the peritoneal end to become occluded, 116 operations were needed on this group of 62 patients. Other series have been reported, but generally the results have been discouraging, mainly because operation was frequently necessary following shunt failure.

Matson[78] has used ureteral shunts extensively and with generally good results. Ventriculoureterostomy has been done in non-communicating hydrocephalus, and lumbar subarachnoid ureterostomy in communicating hydrocephalus. The procedure requires the sacrifice of one kidney, and a close watch must be kept on electrolyte balance afterwards, and extra amounts of salt can be added. The established communication between cerebrospinal fluid and urinary tract provides the possibility of meningitis as long as the shunt functions. In 1956, Matson[79] reported his experience with lumbar subarachnoid ureterostomies on 108 patients. Hydrocephalus was arrested in approximately 65 per cent of the group. As in other such procedures, subsequent obstruction of the tube occasionally occurred. Sixteen per cent of the patients developed obstruction of the tube and required re-operation.

Since 1951, a considerable advancement in the treatment of infantile hydrocephalus has followed the development of the vascular shunts. Although the advancement is recent, the concept itself is not, for Payr[80] first attempted shunting fluid from the ventricle into the venous circulation in 1908. Nulsen and Spitz,[81] in 1952, described a procedure utilizing a valve with a subcutaneous pump for shunting from the ventricle to the internal jugular vein. In 1957, Pudenz *et al.*,[82] reported a technic for shunting fluid into the right atrium of the heart by means of a special valve placed in the distal end of the tube within the right atrium. The two types of unidirectional valve systems in current use are the Spitz-Holter shunt tube, with the valve located in the mid-position, and the Pudenz-Heyer system, with a slit valve at the cardiac end, in the right atrium. The recent review of therapeutic methods for hydrocephalus by Scarff[72] summarized 345 reported cases of hydrocephalus treated by ventriculocardiac shunts. The average operative mortality in these combined series had ranged from 2 to 3 per cent, and arrest of hydrocephalus had occurred in approximately 65 per cent. Thus the procedure appears reasonably safe, and has a fair likelihood of initial success. The late complications, however, remain disturbing. As with any of the shunts for hydrocephalus, obstruction of the tube may occur at either the proximal or the distal end. Thrombosis of the superior vena cava with occlusion of the shunt is likely to occur if the distal end is retracted out of the right atrium and into the venous system as the child grows. This may suggest a need for periodic revision and lengthening of the tube, with aging and growth of the child. Strenger[83] has reported a single case of perforation of the right ventricle by the cardiac end of the tube.

Septicemia has been one of the more disturbing complications of the vascular shunts.[84] Staphylococci have been the predominant offenders, but other organisms have also been cultured. The signs of sepsis may appear in an acute, fulminating fashion, or show a more chronic, smoldering clinical course. Bacterial colonization has been demonstrated at the site of the Spitz-Holter valve itself.

Once septicemia occurs in a child with a ventriculoatrial shunt, success in obliterating the infection cannot be expected until the apparatus has been removed. Subsequent to vigorous, appropriate and prolonged antibiotic therapy, the shunt may be replaced if blood cultures remain negative.

Thromboembolic complications[85, 86] may also require removal of the ventriculocardiac shunt and substitution of a different type of procedure. Emboli arising from the cardiac end of the tube pass into the pulmonary arterial vasculature, resulting in pulmonary hypertension and subsequent cor pulmonale.[87] This may develop insidiously, and the child, even though asymptomatic, is found to have a loud second sound in the pulmonic area and roentgen evidence of prominence of the pulmonary artery conus, along with right ventricular hypertrophy and right axis deviation on electrocardiography. Emery and Hilton[88] studied the pulmonary complications of the vascular shunts for hydrocephalus, and questioned whether all the pulmonary vascular changes could be due to emboli. They raised the possibility of a response of the pulmonary vessels to some component of the cerebrospinal fluid.

Other complications of ventriculoatrial shunts have been described, but much less commonly than the above. Cardiac arrhythmias may occur with a change of position of the intracardiac portion of the tube. Separation of the distal part of the shunt apparatus, with tube embolization into the right ventricle or pulmonary arteries, adds to the complexity of the problem.

The contraindications for ventriculocardiac shunting in hydrocephalic infants have not yet become clearly defined. The procedure should be avoided in patients with congenital heart disease associated with left-to-right shunts, because of the likelihood of further overloading the right heart and causing heart failure. Active intracranial infection precludes vascular shunting. Not only would the tube disseminate the infection, but also it would function only temporarily. Patients with histories of bacterial endocarditis or other types of valvular heart disease are unacceptable candidates. However, these conditions are ordinarily seen in older individuals, and thus they infrequently give rise to problems in shunt therapy for hydrocephalus. Although blood or a very high protein content in the ventricular fluid do not constitute specific contraindications, they do reduce the likelihood of surgical success with ventriculocardiac shunts. Repeated occlusion of the ventricular end of the tube may require multiple surgical procedures and eventual utilization of an entirely different approach. Recently, the ventriculostomy reservoir[89] has been found useful as a device to prevent the progression of hydrocephalus and to permit improvement of the fluid composition. Subsequently the ventriculocardiac shunt procedure can be done at a more opportune time and with greater likelihood of success.

A final comment concerning surgical therapy for specific types of hydrocephalus deals with the Dandy-Walker syndrome. The conventional approach, after identification of this disorder, is suboccipital craniectomy with excision of the cyst wall to establish communication between the fourth ventricle and the cervical subarachnoid space. Matson[45] has pointed out, however, that simply restoring communication may not suffice in a number of such cases, and that subsequent shunting procedures may be necessary. If preoperative air and dye studies provide clear evidence of communication, one must consider the

feasibility of a ventriculoatrial shunt as the primary definitive therapy.

Medical management of progressive hydrocephalus in infancy has generally been unsuccessful. The study by Huttenlocher,[90] however, suggests possible benefits from acetazolamide (Diamox) as a means of reducing intracranial pressure, though the mechanism by which acetazolamide reduces CSF formation remains unclear. It has been suggested that as a carbonic-anhydrase inhibitor this drug interferes with sodium transport across the choroid plexus by decreasing available exchangeable hydrogen ions.[91] The net result of inhibiting the entry of sodium into the ventricle would be a decrease in CSF formation, since water appears to be passively drawn in to maintain osmotic relationships. The potential usefulness of acetazolamide for hydrocephalus in infancy deserves further consideration and trial.

SUMMARY

Several general points can be made in an attempt to summarize the current status of treatment of hydrocephalus in infancy. There is no doubt that an acceptable approach to therapy can be devised only after adequate diagnostic studies have clarified the nature and site of the pathology.

Having eliminated such disorders as subdural hematoma or tumor, one should direct his attention to the possible ways of influencing cerebrospinal-fluid dynamics in the hydrocephalic infant. Acetazolamide shows promise, although its clinical usefulness remains to be seen.

The need for a surgical procedure is in part dependent on evidence that the process is progessive. The child with early hydrocephalus whose disorder has undergone spontaneous arrest can be safely watched without surgery. However, acceptable arrest means that the head size enlarges minimally, if at all, until the rest of the body and linear length catch up. Continued growth of the hydrocephalic head at the normally expected rate cannot usually be accepted as evidence of arrest. In the past, thickness of the cerebral mantle has been used as a criterion for operability, but this has not proved reliable, since no direct relationship has been found between thickness of the mantle and potential intellectual development. It is generally agreed that none of our currently available shunt procedures are totally satisfactory, but in the hands of most, the ventriculocardiac shunt remains the most popular.

The delayed complications of this procedure which have been described here indicate the need for continued efforts to find new and varied approaches for the management of infantile hydrocephalus.

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Malignant Small-Bowel Tumors

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MALIGNANT SMALL-BOWEL TUMORS are rare, comprising only 0.16 per cent of all malignant tumors listed in the tumor registry of University Hospitals. Because of their rarity and the lack of any specific clinical findings, they are seldom dignosed prior to operation. Following is an account of our experience with these neoplasms covering a 25-year period.

MATERIALS

This report evaluates the records of 62 patients with malignant small-intestinal neoplasms taken from the tumor registry of University Hospitals from 1938 to 1963. The diagnosis was established histologically in each case. Fifty-two tumors were diagnosed at laparotomy and 10 tumors at autopsy. The average age of the patients at the time of diagnosis was 61.3 years, and the range was 29 to 93 years. There were 39 males and 23 females.

TREATMENT

Operative procedures were considered curative, palliative or diagnostic on the basis of preoperative and operative findings. Potentially curative procedures were performed on 14 (26.4 per cent) of the 52 patients (Table 1). Twenty-eight (56 per cent) had palliative procedures for relief of obstruction or severe hemorrhage. Ten patients (18.8 per cent) were considered inoperable and had diagnostic biopsies only.

RESULTS

The largest number of tumors were adenocarcinomas (46.7 per cent). The rest were carcinoids (30.6 per cent), sarcomas (11.3 per cent) and lymphomas (11.3 per cent) (Table 2). The most common site was the ileum. Twenty-nine tumors (46.7 per cent) were found there. Fifteen (24.2 per cent) of them were located in the duodenum, and 16 (25.8 per cent) were in the jejunum. In two cases the entries in the registry did not specify the exact location of the primary tumor. The carcinomas were fairly evenly distributed throughout the three portions of the small intestine. Carcinoid tumors, according to the University Hospitals record, were increasingly frequent in the more distal portions of the small intestine.

The most common clinical pattern observed in this series was obstruction (73.8 per cent). Bleeding occurred in 40.4 per cent, a palpable mass was present in 25.2 per cent, and perforation was found in 9.5 per cent (Table 3).

The majority of cases were diagnosed within six months of the onset of symptoms, and seven of the 10 symptomatic carcinoids were diagnosed within one month of the onset of symptoms. The majority of the lymphomas and sarcomas had been symptomatic for more than six months prior to diagnostic laparotomy (Table 4).

Nine of the 14 patients who had curative resections survived five years or more. Four of these patients were alive and free of disease as of June, 1964. Two other patients are still alive less than

TABLE 1

INTENT OF OPERATION

	Carcinoma	Carcinoid	Sarcoma	Lymphomas	Totals	Per Cent
Curative	4	4	4	2	14	26.4
Palliative	17	2	4	5	28	56.6
Biopsy only	6	4	0	0	10	18.8
Totals	27	10	8	7	52	

TABLE 2

TYPE AND LOCATION OF MALIGNANT TUMORS

	Duodenum	Jejunum	Ileum	Not Specified	Total	Per Cent
Carcinoma	12	7	9	1	29	46.7
Carcinoid	1	5	12	1	19	30.6
Sarcoma	2	2	3	0	7	11.3
Lymphoma	0	2	5	0	7	11.3
Totals	15	16	29	2	62	
Per Cent	24.2	25.8	46.7	3.2		

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TABLE 3

CLINICAL PATTERNS

	Obstruction	Bleeding	Mass	Perforation
Carcinoma	19	12	6	0
Carcinoid	6	1	0	1
Sarcoma	4	3	4	1
Lymphoma	2	1	1	2
Totals	31	17	11	4
Per Cent	73.8	40.4	25.2	9.5

TABLE 4

DELAY IN MONTHS FROM ONSET OF SYMPTOMS TO DIAGNOSIS

	Carcinoma	Carcinoid	Sarcoma	Lymphoma
Less than 3 months	13	8	0	1
3 to 6 months	4	0	1	2
6 to 12 months	5	1	1	1
1 year or more	5	0	5	3
No information	2	1	0	0
Totals	29	10*	7	7 53

* Nine additional carcinoids diagnosed at autopsy.

TABLE 5

POSTOPERATIVE MORTALITY DATA ON 49 PATIENTS*

	0-6 mo.	6-12 mo.	1-5 yr.	5-10 yr.	10 yr.	
Carcinoma	12	3	9	1	1	
Carcinoid	3	0	4 (1)†	2 (1)†	0	
Sarcoma	1	2	0	4 (3)†	0	
Lymphoma	2	0	4 (1)†	0	1	
Totals	18	5	17 (2)†	7 (4)†	2	49
Per Cent	36.8	10.2	34.7	14.3	4.1	100

† Patients alive and free of disease as of June, 1963.
* Three patients lost to follow-up.

TABLE 6

INCIDENCE OF A SECOND PRIMARY MALIGNANCY

		2nd Malignancy
Carcinoid	19	7
Carcinoma	29	2
Sarcoma	7	0
Lymphoma	7	0
Totals	62	9 (14.5%)

five years following operation. One patient with a carcinoid tumor was apparently free of disease three years postoperatively, and one patient with a lymphoma was alive one year and six months after operation (Table 5).

Second primary malignancies were discovered in nine of the 62 patients (14.5 per cent). Seven of those nine tumors occurred in the 19 patients with carcinoid tumors (Table 6), for an incidence of 36.8 per cent.

DISCUSSION

Our 25-year experience with malignant small-bowel tumors reaffirms the rarity ascribed to them in the literature.[1, 2, 3] In a 40-year collective review (1920-1960), Rochlin and Longmire reported 650 cases.[4] We have diagnosed fewer than three cases of this disease per year at University Hospitals.

Location. In our patients, the number of tumors in the ileum was almost equal to the number in the jejunum and in the duodenum combined, and this finding agrees quite remarkably with comparable ones in other series.[4, 5, 6] Carcinoids predominate among the tumors occurring in the ileum.[2]

Types of Tumors. Adenocarcinoma was the most common type of tumor occurring in the small bowel (46.7 per cent in our series), followed by carcinoid and sarcoma. This ranking finds general accord in the literature.[4, 7, 8]

Symptoms. In our series, only six of the 52 patients had a tentative preoperative diagnosis of small-bowel tumor. Because of the rarity of small-bowel neoplasms, future improvement in accuracy of preoperative diagnosis is unlikely. Symptoms, although non-specific, can be grouped into four general patterns according to frequency: obstruction, bleeding, mass and perforation.[5] A more sophisticated classification of clinical findings, we feel would be unrewarding in an over-all approach to the diagnosis of small-bowel malignant tumors.

Treatment and Survival. Approximately 26 per cent of the patients in this series had resectable small-bowel malignancies (14 out of 52 patients). Others have reported higher resectability rates, from 40 to almost 60 per cent.[4, 9] Nine of our 52 patients survived for more than five years, for an over-all five-year survival of 18.4 per cent. In our group, the patients with sarcomas were entitled to the most favorable prognosis (four out of seven lived five years or longer), and those with adenocarcinomas to the worst prognosis. Other authors report survival rates ranging from 8 to 30 per cent.[4, 8] The referral nature of our practice at University Hospitals may be a partial explanation for the rather low resectability rate in our patients.

Although malignant small-bowel tumors are infrequently encountered, they should be treated like colon lesions by wide resection of the neoplasm and the node-bearing tissue. The excellent

survival rates for patients with resectable lesions should encourage aggressive treatment.

SUMMARY

Sixty-two malignant small-bowel tumors have been reviewed, and the clinical patterns, types and locations of tumors, and the operability and survival rates have been discussed.

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Cancer Programs: The Iowa Central Tumor Registry

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THE PRINCIPAL OBJECTIVE of a cancer program is to improve the medical care of the patient with cancer. A tumor registry is an essential part of a cancer program, and associated with the tumor registry, there is usually a clinical program—a tumor clinic, board or conference.

THE ROLE OF THE AMERICAN COLLEGE OF SURGEONS IN CANCER CONTROL

Most cancer programs function in hospitals. The standards established by the American College of Surgeons provides the guide lines for their organization and operation. Since it was founded, in 1913, the American College of Surgeons has had an active interest in cancer control, and in 1933, its Committee on Cancer, serving in an advisory capacity to the Board of Regents of the College, established minimal standards for cancer programs. Now called the Commission on Cancer, that group is responsible for the approval and acceditation of new programs and for periodic surveys of existing ones. The accreditation program is administered by the Department of Professional Services, which is headed by an assistant director responsible to the director of the American College of Surgeons. A full-time field staff of physicians evaluates the cancer programs that have applied for approval, and surveys the previously approved programs at three-year intervals.

There are five requirements for American College of Surgeons approval of a cancer program. First, the program must be conducted by a hospital approved by the Joint Commission on Accreditation of Hospitals or by the Canadian Council on Hospital Accreditation. In lieu of either of these, the program may be conducted by a local or county medical society, or by a clinic group which treats patients with cancer and has the formal approval of the local or county medical society or of the College.

Second, each cancer program must have a committee on cancer. This committee should include representatives from the specialities of surgery, internal medicine, radiology and pathology. Its responsibilities include the appointment of a director for the cancer registry and the clinical program; consultation with the hospital administration concerning personnel, equipment, space and facilities; and supervision of the tumor registry.

Third, there should be a clinical cancer program, which may be referred to as a tumor clinic, board or conference. Usually the tumor clinic, board or conference provides consultation only, but in some instances it may undertake the treatment of patients. The types of clinical cancer programs vary, depending on local medical practice policies. The director of the clinical program must

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be knowledgeable about cancer and must be an enthusiastic supporter of the cancer program. All of the hospital or clinic-staff physicians and other physicians in the community should be invited to refer their cancer patients and to participate in the clinical program. After each patient has been seen, he is referred back to his physician, and the secretary or chairman sends that doctor a summary of the conclusions and recommendations of the tumor clinic. In addition to an enthusiastic director, an effective clinical program requires representatives from all specialities concerned with the diagnosis and management of cancer—or, as a minimum, a surgeon, an internist, a pathologist and a radiologist.

The fourth requirement for approval is a tumor registry. A tumor registry is a repository of records containing pertinent information concerning the diagnosis, treatment, follow-up and end results on patients in whom cancer has been diagnosed. In order that the registry may achieve its primary objective of providing a valid picture of cancer care in the hospital or clinic where it functions, every case of cancer must be registered. The registry will always be closely associated with the medical records department, and it may function as a part of it. The registry must be closely supervised by the director of the clinical program and the committee on cancer. The methods used by registries differ considerably, but they have the common objective of making data available and useful to the physicians who care for the cancer patients.

Finally, each year a report of the end results of cancer therapy must be prepared for the medical staff. If this annual report of survivals and end results is valid, it provides quality control for patient care. The field representative of the American College of Surgeons will review the annual reports of survivals and end results during his triennial surveys.

The approval program fulfills an important function by establishing standards for cancer programs, and the survey program is important in that it assures the maintenance of those standards. However, the accreditation program does not provide solutions for all of the possible difficulties. In order to help cancer programs find answers to their problems, the Committee on Cancer of the American College of Surgeons inaugurated a regionalization program in 1962. The regionalization program is implemented by the "liaison fellow" appointed by the American College of Surgeons for each state. Liaison fellows are members of ACS who have agreed to serve as voluntary consultants to cancer programs in their respective states. This program has been well received and is being expanded.

WHY CANCER PROGRAMS?

Cancer programs exist and are increasing in numbers for several reasons. (1) They cause more biopsies of suspicious lesions to be performed. As a result, the diagnosis is made earlier, and treatment is started earlier and is more precise and more effective. (2) Improvement in the quality of cancer-patient records results in an overall upgrading of hospital medical records. (3) The systematic follow-up provides quality control of the care given the cancer patients. (4) The feed-back to local hospitals and their registries is a valuable educational tool. The cancer program encourages the initiation of clinical research, since the registry is a valuable source of data. (5) As a result of the organized and complete follow-up of patients with cancer, additional tumor-directed treatment is begun earlier. The net result of the cancer program is to improve the care given to the patient with cancer.

FINANCIAL SUPPORT OF CANCER PROGRAMS

The American College of Surgeons does not provide financial support for cancer programs. The amounts and forms of financial support provided by the American Cancer Society to cancer programs are determined by the policies of the national organization and its state divisions. In some states, the major long-term support of local cancer programs is provided by the American Cancer Society through its state divisions. In general, however, it is the policy of the American Cancer Society to provide only "seed money" for new programs. Major financial support for cancer programs in Iowa and in many other states consists of funds for cancer control granted to the State Department of Health by the United States Public Health Service. The methods of distributing these funds vary in the different states.

In addition to providing an important service to the patient, the cancer program strengthens the educational programs of the hospitals. As hospital administrators become increasingly aware of these two important roles of cancer programs, they are making provisions for them in hospital budgets. In the future, the hospital cancer program will come to be regarded as just as essential to a well run hospital as are the medical library, the medical record room or the pharmacy. Additional possible sources of support for local cancer programs are direct grants from the United States Public Health Service, from the state medical society and from private funds, including those derived from the care of private patients.

IOWA CANCER PROGRAMS

In Iowa, there are 11 cancer programs approved by the American College of Surgeons and two not approved by the College. Seven of the programs are identified with hospitals, and the Clinton, Lee, Wapello and Pottawattamie County Medical Societies sponsor the other four. Most of the financial support for 10 of the Iowa programs comes from the formula grant of the United States Public

Health Service to the State Department of Health for the control of cancer. The programs at the Veteran's Administration and University Hospitals are supported by other funds.

A tumor registry is functioning as a part of each of those 13 programs. The clinical aspects of these programs vary greatly. At the one extreme is a cancer clinic which meets each Saturday morning at 8:00. Its meetings are attended by about 10 physicians interested in cancer control. Four to eight patients, most of them private, are seen each week. Slides from lesions of patients seen previously in the clinic may be reviewed. A report is sent by the tumor-clinic secretary to the referring physician, summarizing the findings and the recommendations of the physicians attending the clinic. The recommendations are not discussed with the patient. At the opposite extreme are four cancer programs which have no organized clinical activity.

BACKGROUND OF THE IOWA CENTRAL TUMOR REGISTRY

In 1963, when I was appointed as the liaison fellow of the Committee on Cancer of the American College of Surgeons for the State of Iowa, I reviewed the cancer programs functioning in the state. I visited several of the tumor clinics and registries and got in touch with the chairmen or directors of all the other cancer programs, so as to explain the regionalization program of the American College of Surgeons. Each chairman or director was invited to discuss the problems confronting him and his program, and consultation was offered. In general, these overtures were well received. From the discussions growing out of these contacts emerged a clearer picture of the present status of Iowa cancer programs and how they might be made more effective.

Iowa cancer programs in general are headed by competent physicians who are knowledgeable and interested in cancer control. In most instances the tumor-clinic records and the registries are maintained by competent, experienced and interested tumor-registry secretaries. In general the annual follow-ups have been conscientiously and adequately done. The most common and important question raised was, "How can the data deposited in the registries be made more available, meaningful and useful?" The cancer program chairmen or directors frequently indicated doubt about the worth of their activities, and particularly of their registries, because of the difficulties involved in analyzing the data that had been collected. Rarely has it been possible to produce the desired current survival and other findings in a form that was useful to the professional staff.

There is an answer to this question today. It is to facilitate automated processing of the cancer data. Because of the cost of data-processing equipment and the scarcity of trained personnel necessary to operate that equipment, the establishment of a central tumor registry with data-processing equipment constitutes the best method of achieving this objective. In Connecticut, California, West Virginia, Missouri and New York, central tumor registries have been or are being developed to provide such data-processing services for local cancer programs.

As a result of discussions with physicians participating in local cancer programs in Iowa, and discussions with State Health Department personnel responsible for administrating the financial support of the registries, representatives of the American Cancer Society, Iowa Division, Inc., interested faculty members at the College of Medicine and others of the medical profession, it was decided to explore the idea of forming an Iowa Central Tumor Registry. On May 27, 1965, representatives of the 13 Iowa cancer programs and of the other interested organizations met for that purpose. They enthusiastically and unanimously endorsed the idea.

ORGANIZATION OF CENTRAL REGISTRY

Following the May meeting, an agreement was made between the State Department of Health and the College of Medicine for the operation of the Central Registry in Iowa City. The College of Medicine agreed to make available data-processing facilities, space and fixed equipment, to provide access to the University Hospitals tumor registry, and to furnish personnel to direct the Central Registry. Funds were committed by the State Department of Health and the Iowa Division, American Cancer Society, Inc., to initiate the Central Tumor Registry program.

The *modus operandi* of the Central Registry will be determined by an advisory committee consisting of its director (Dr. Joseph A. Buckwalter); the State Commissioner of Health (Dr. Arthur P. Long); a representative of the Iowa Division, American Cancer Society, Inc. (Dr. Harold W. Morgan); a representative of the Iowa Medical Society (Dr. Frederick W. Stamler); the director of the University Hospitals cancer registry (Dr. Howard B. Latourette); and another faculty member at the College of Medicine (Dr. William R. Anderson).

With the assistance of the supervisor of the Iowa Central Tumor Registry, the director proceeded to formulate plans for the Central Registry, and they were approved at a meeting of the advisory committee on September 10, 1965.

On September 21, 1965, a workshop for the local tumor-registry secretaries was held. One or more representatives from each of the 13 cancer programs which had previously indicated a desire to participate in the Central Registry, attended the workshop. Procedures for the operation of the Central Registry were reviewed. Each local registry was provided a copy of the handbook which

the director and the supervisor had prepared, describing the procedures of the Iowa Central Tumor Registry. Following receipt of a ruling from the Iowa Attorney General establishing the legal basis for sending information from the local to the Central Registry, the secretaries of the local tumor registries were instructed to begin sending case abstracts to the Central Registry.

CENTRAL REGISTRY PROCEDURES

Procedures of the Iowa Central Tumor Registry will now be briefly summarized. A form has been prepared for use in abstracting cases to be sent to the Central Registry (Figures 1 and 2). The local tumor-registry secretary completes the abstract in duplicate from each patient's hospital record. Abstracts are forwarded once each month to the Central Registry, and a copy of each abstract is filed in the local registry.

The value of the Central Registry will depend in large measure, as will the value of each local tumor registry, upon the degree to which complete reporting of cancer is achieved in the local hospital. Each of the participating registries has been supplied with a list of the neoplasms reportable to the Central Registry. Cases of cancer are found through the medical record department; out-patient registrations; pathology, surgery, autopsy, radio-therapy and operative reports; and correspondence with physicians. In order to approach the optimum 100 per cent cancer case coverage, the understanding, cooperation and best efforts of the hospital-staff physicians and paramedical personnel are required.

When the case abstracts prepared by the local tumor-registry secretaries are received at the Central Registry, they are edited for reportability of diagnosis, for completeness and for consistency. If the abstract is found to be incomplete or if the recorded information is inconsistent, it is returned to the local registry with the appropriate queries. The Central Registry's alphabetical master file is then checked to determine whether the case is a "duplicate" (previously reported by the same or another hospital) or a "multiple" (a different neoplasm that has occurred in a patient previously reported). If it is one of the former, the second abstract is stamped "duplicate" and is assigned the same registry number as the first. Any additional information recorded on the second abstract is added to the original abstract. Since the Central Registry is concerned with cases rather than with patients, in a "multiple" case, the second abstract is assigned a new registry number and is processed as a "new" case. A Central Registry number is then assigned. A card bearing the patient's name, Central Registry number, race, sex, age, local hospital and primary site of the neoplasm is then prepared and added to the master file. Next, the case is entered in the Central Registry accession book.

The abstracts which have been edited and found satisfactory are then coded. The code used in the Iowa Central Tumor Registry has been prepared by the director and the supervisor. The histologic diagnosis is coded according to the MANUAL OF TUMOR NOMENCLATURE AND CODING of the American Cancer Society. The primary site code used is the one recorded in the MANUAL OF THE INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES, INJURIES AND CAUSES OF DEATH, WHO. The treatment code is that recommended by the End Results Committee of the National Cancer Institute.

The coded abstracts are sent to the University of Iowa data-processing department, where the data are transferred to two IBM punch cards. After the cards have been verified, they provide the in-put for a program written for the Central Tumor Registry. The data are stored on magnetic tape. After being processed, the abstracts are arranged alphabetically by patients' names in the file of the local registry.

For each participating registry, each month, the data-processing department will print out on the follow-up form (Figure 3), the names of patients due for follow-up, their Central Registry numbers, their dates of diagnosis and the dates on which the last information was entered regarding the respective patients. This follow-up form, in each instance, will reach the local registry two months before the annual follow-up is due. The local registry then will obtain the follow-up information, record it in the appropriate places on the follow-up form, and return the form to the Central Registry. After the data have been edited and coded, the follow-up form is returned to data processing. An IBM card is punched and the tape is updated. Ten months later, the local registry will receive another follow-up form on which will appear the names of the patients who had been reported as surviving the year before.

By the first of October, each participating hospital will receive an annual report from the Central Registry stating the number of cases of each neoplasm registered for the local registry during the preceding year, the numbers of operations and other types of therapy performed, and the current survival status of cases previously registered.

In order to achieve the important objective of

Meeting of the
IMS NOMINATING COMMITTEE
1:30 p.m., Sunday, March 13
New IMS Headquarters Building
West Des Moines
Meetings of the Nominating Committee are open to all members of the IMS in good standing, except when the Committee goes into executive session.

HOSPITAL _____ NO. _____ PAGE NO. _____

FOLLOW-UP DUE _____

IOWA TUMOR REGISTRY
CONFIDENTIAL FOLLOW-UP

	PATIENT NAME	CENTRAL REGISTRY NUMBER 1-6	LOCAL REGISTRY NUMBER	DATE OF DIAG. MO.	DATE OF DIAG. YR.	DATE OF LAST INFORMATION MO.	DATE OF LAST INFORMATION YR.	CURRENT INFORMATION: DATE 7-10 MO.	DATE 7-10 YR.	SUBSEQUENT TREATMENT	STATUS OF PATIENT ALIVE	STATUS OF PATIENT DEAD	MED EXAM YES	MED EXAM NO	STATUS OF NEOPLASM FREE	STATUS OF NEOPLASM NOT FREE	STATUS OF NEOPLASM UNKNOWN	PLACE OF DEATH	FOR CENTRAL REGISTRY USE: MALIGNANCY 11	SEQ. NO. 12	SUBSEQUENT TREATMENT 13-15	SOURCE 16	STATUS 17-18	SYMPTOM FREE PERIOD 19	FIRST METASTASES 20-21	CAUSE OF DEATH 22-25	AUTOPSY 26	IBM CARD CONTROL 27-30	CODE 31	S H S 32

up-to-date feed-back to the local registries, it is necessary for local registries to meet two deadlines. The first has to do with the preparation of abstracts. The case abstracts are to be prepared by the local tumor-registry secretaries *no sooner than three* and *no later than six months* after the date of diagnosis. The purpose of the three-month minimum is to allow sufficient time for initial therapy to be finished and for the patients' medical records to be completed. The six-month maximum time allowed for the preparation of the abstracts is imposed so as to make sure that all abstracts for the current year will be in the Central Registry no later than July 1 of the following year. Thus time will be available for analysis of the data obtained from the local registries, and for preparing the annual reports and mailing them to the local registries by the first of October.

CENTRAL REGISTRY OBJECTIVES

The most important objective of the Central Registry is to furnish automatic storage, retrieval and analysis of cancer data for the local registries. The annual report to the local registry will provide an accurate picture of cancer care in the local hospital. As stated before, the value of this information will depend on the completeness with which cancer cases are reported by the local registry and on the quality of the abstracts. In addition to the annual report based upon cases of cancer reported by the local registry, each local registry will receive a report reflecting the total experience of the Central Registry. By comparing these two reports, the local professional staff will gain additional understanding of the local cancer picture and of the control of cancer that is being achieved.

The monthly lists of cases due for follow-up received by the local registries will make it unnecessary for the local registries to maintain reminder files. The local registries will receive additional benefits from their participation in the Central Registry. The Central Registry will obtain death certificates from the Division of Vital Statistics for all patients who have died. After recording

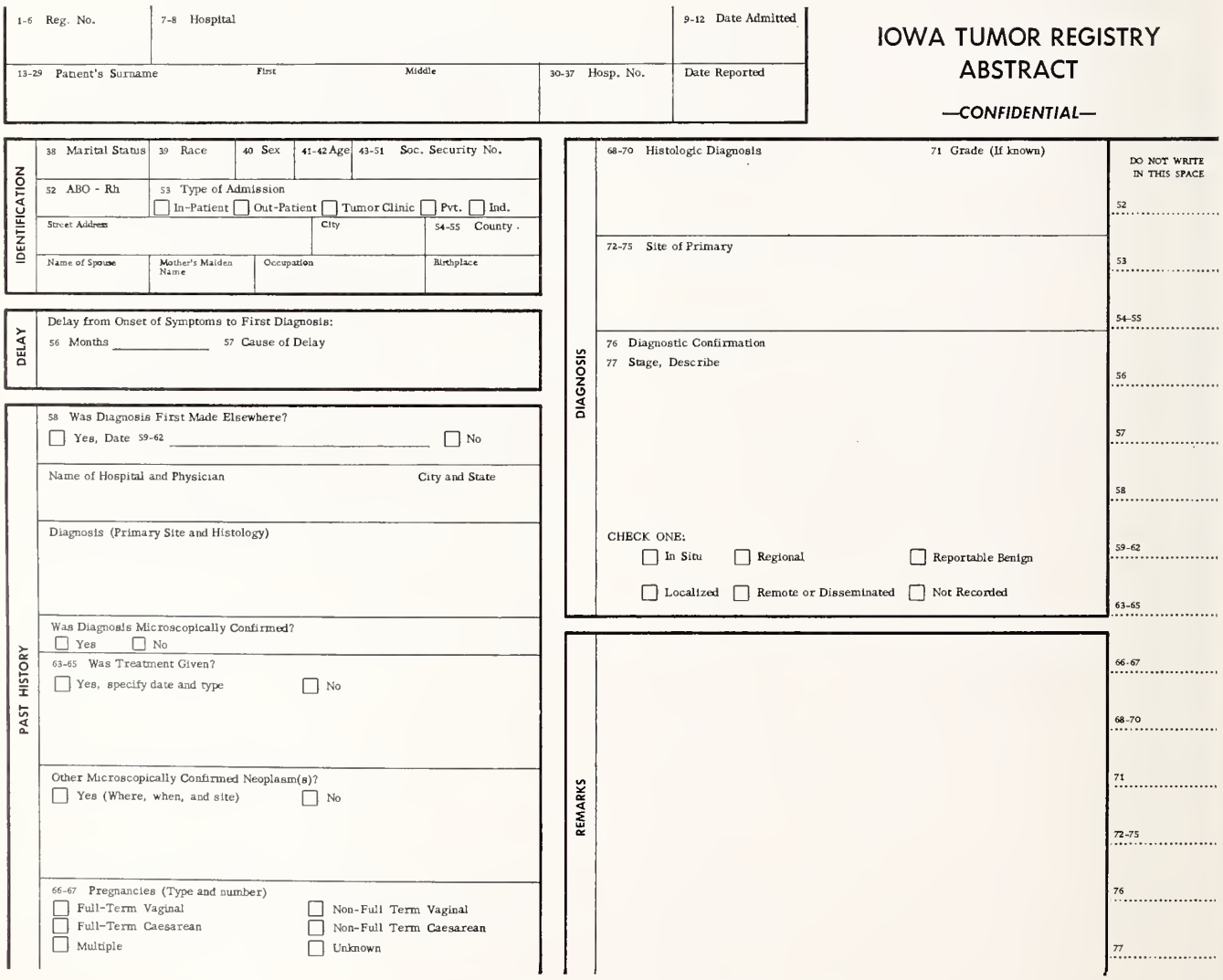

Figure 2. Reverse side of Iowa Tumor Registry abstract.

the death information, the Central Registry will send the death certificate to the local registry. Patients lost to follow-up by the local registry will be found by the Central Registry if they have been treated at other Iowa hospitals or have died, and this information will be forwarded to the local registry which submitted the original abstract of the case. All the data stored in the Central Registry are available for use by the professional staff of the participating registries and other members of the medical profession in Iowa. Thus, the Central Registry will provide a rich source of data for clinical research projects.

As the Central Registry grows, it is anticipated that it will stimulate the development of cancer programs in Iowa communities where none exist today. The Central Tumor Registry personnel will assist these communities and hospitals with the organization of their cancer programs. These new programs will be the beneficiaries of the painfully and expensively acquired experience of the presently operating local registries and the Central Registry.

It is not possible to obtain a meaningful concept of the incidence of different kinds of cancer from hospital admissions, discharges or death data. The most reliable source of information concerning the incidence of cancer in the United States is the Central Tumor Registry of the state of Connecticut, which aims for and, for practical purposes, achieves complete reporting of cancer in that state. The advisory committee of the Iowa Central Tumor Registry has discussed complete coverage of cancer in Iowa as a long-range objective. Since Iowa and Connecticut have populations of similar size but of quite different compositions, a comparison of incidences in the two states would contribute significantly to an understanding of the epidemiology of cancer.

It is suggested that physicians not now participating in local cancer programs may find it informative, interesting and profitable to do so. An objective of the Central Tumor Registry is to assist in the development of local cancer programs. Physicians interested in starting cancer programs in their communities are invited to write to the director of the Central Tumor Registry.

TREATMENT

Date	Treatment, Describe 78-80	Date		DO NOT WRITE IN THIS SPACE
	Surgery		Steroid / Hormone	
	Radiation-Beam		Supportive Only	78-80
	Radiation—Other		Other	
	Chemotherapy		No Treatment (Specify Reason)	

FOLLOW-UP INFORMATION

Date of Follow-Up Information 7-10	Verified by Med. Exam 16		Status of Neoplasm 17-18			Remarks	
	YES	NO	FREE	NOT FREE	UNKNOWN		1-6
							7-10
							16
							17-18

DEATH INFORMATION

Date of Death | Place of Death | Autopsy Performed ☐ Yes ☐ No — Findings 26 — 22-25

Death Certificate Information

State File Number | Coded Cause of Death 22-25 — 26

Part I (A)

(B)

(C)

Part II

17032-5M:9-65

Figure 3. Follow-up form of Iowa Tumor Registry.

Primary Pulmonary Emphysema in Women

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THE CAUSE OF pulmonary emphysema is unknown. Sometimes the disease occurs as a primary disorder without any recognizable antecedent difficulties. It tends to affect old people, particularly elderly men who have been heavy cigarette smokers for many years, but it is our purpose to report observations on 12 relatively young women with the classic findings of pulmonary emphysema who had histories of minimal lung disease, and in whom no other lung disease could be found by physical examination and laboratory tests. Ten of the 12 were smokers.

The authors are an associate professor and a professor of internal medicine, respectively, at the U. of I. College of Medicine. Their investigation was supported by a research grant (H07104) from the National Heart Institute of the United States Public Health Service, and aided by a grant from the Iowa Tuberculosis and Health Association. In addition, it was supported in part by a Public Health Service Research Career Program Award (HE-K3-4007) from the National Heart Institute.

METHODS AND MATERIALS

The 12 women ranged in age from 31 to 65 years, and they were selected from the wards and clinics of University Hospitals, Iowa City. In each instance, a complete history had been recorded, a physical examination had been given, a roentgenogram of the chest had been taken, and appropriate laboratory tests had been performed. Pulmonary function tests were done in the morning after the

PHYSICAL CHARACTERISTI

Patient	Age	Chief Complaint	Shortness of Breath Age*	Exertional	Nocturnal	Episodic	Cough Frequency (times/day)	Cough Duration (years)	Cough Type	Hemoptysis
E.B.	42	Edema—3 years Dyspnea—3 years	38	+	0	0	5 to 10	3	Throat Clearing	0
H.N.	54	Tumor in abdomen	53	0	0	0	0			0
A.B.	53	Dyspnea—10 years Frequent chest infections	43	+	0	0	5 to 10	10	Throat Clearing	0
M.F.	38	Cough—5 years Dyspnea—3 years	33	+	0	0	5 to 10	5	Hacking	0
M.B.	65	Dyspnea—10 years Cough—30 years	35	+	0	0	10 to 20	30	Dry Hacking	0
L.F.	49	Headaches—3 months	49	0	0	0	0	0		0
W.D.	44	Dyspnea—4 years	40	+	0	0	3 to 6	3	Dry	0
H.G.	46	Dyspnea—2 years	44	+	0	0	0			0
J.H.	45	Cough—9 years	36	+	0	0	20 to 40	9	Dry Hacking	0
J.K.	48	Pneumonia—7 times in last 4 years	44	+	0	0	With infections	4	Dry	0
D.T.	31	Bronchitis—5 years Dyspnea—5 years	26	+	0	0	With infections	5	Hacking	0
B.A.	47	Pneumonia Productive cough 5 years Dyspnea—5 years	42	+	0	0	Frequent	5	Deep Productive	+

* Onset of Chief Complaint
0 = No
+ = Yes

patient had eaten breakfast. The methods used were the standard ones used in the U. of I. laboratory, and they have been reported elsewhere.[1]

RESULTS

The physical characteristics of the 12 subjects and the principal features of the histories obtained from them are presented in Table 1. The chief complaint of most of the patients was dyspnea or cough or frequent pulmonary infections, or a combination of the three. One patient sought help because of headaches, and one patient called her doctor because she had an abdominal tumor. Ten of the 12 patients had shortness of breath on exertion. The patient with the abdominal tumor and the one with headaches did not complain of shortness of breath.

Most of the patients said that they coughed five to 10 times a day; some patients coughed only with infections; and three did not complain of cough. Only one of the 12 patients had experienced hemoptysis. Nine patients produced sputum regularly, in amounts varying from one-eighth cup to one cup per day. Three of the 12 patients had family histories of allergy.

Nearly all of the patients were married and had children. Most were housewives, two were nurses, one had done factory work, one was a piano teacher, one was a clerk, one was an IBM operator and one was a waitress. Ten of the 12 patients had been cigarette smokers for periods ranging from 14 to 35 years. Nine smoked at least one pack per day, but one said she smoked only one pack of cigarettes per week. None of the patients was overweight, and several had lost weight. Two patients, MF and PA, had had whooping cough during childhood.

None of the patients had been exposed to toxic dusts or fumes, and none of the patients had had influenza.

The results of the physical examinations are summarized in Table 2. Most of these women were slender and underweight. They had lost weight during the past three years. At the time they were first seen, none weighed over 145 pounds. The striking chest signs were diminished expansion of the chest and diminished breath sounds. Four of the 12 had increased anteroposterior diameter of the chest, but in the eight others the anteroposterior diameter was normal. Five had a few rales or wheezes.

Examination of the heart was essentially normal in all patients, except that the heart tones were distant. Two patients had systolic murmurs.

HISTORICAL INFORMATION

Sputum				Family				Cigarette Smoking		Weight Loss		
Amount/Day (cups)	Character	Color	Nasal Symptoms	History of Allergy	Drugs	Occupation	Time (years)	Amount (packs/day)	From	To	Time
1/8	Thick	White	0	0	0	Housewife	20 years	2 packs/day	147	117	3 yrs.
0			0	0	0	Housewife	35 years	1 pack/day	110	110	—
1/8	Thick	White	0	0	0	Nurse Housewife	20 years	1 pack/wk.	152	128	2 yrs.
1/8	Thick	White	0	+	0	Factory Worker	20 years	1 pack/day	114	114	
1/4	Thick	White	0	0	0	Piano Teacher	0		125	91	14 yrs.
0			0	0	0	Housewife	25 years	1 pack/day	145	145	
1/4	Thick	Yellow	0	0	0	Clerk Housewife	20 years	1 pack/day	134	134	—
0			0	+	0	Housewife	25 years	1 pack/day	115	95	2 yrs.
1/4	Thick	White	0	0	0	IBM Operator Housewife	20 years	Up to 1 pack/day	95	77	8 yrs.
1/4	Thick	Yellow	0	0	0	Nurse Housewife	25 years	2-3 packs per day	131	131	
1/4	Thick	Yellow Green	0	+	0	Housewife	14 years	1 pack/day	120	100	3 yrs.
1	Thick	Yellow	0	0	0	Waitress Housewife	No		125	120	3 yrs.

The results of the initial laboratory studies are shown in Table 3. The leukocyte count was usually normal, although it ranged from 4,200 to 18,500/cu. mm. The hemoglobin ranged from 11.0 to 16.3 Gm./100 ml. Chest roentgenograms showed prominence of the pulmonary artery, increased radiolucency of the lung fields, flat diaphragms and cysts. It should be emphasized that in three patients none of these roentgenographic abnormalities was present, and that the chest x-ray was interpreted as normal. This is a point to be emphasized: A normal chest film *does not* exclude pulmonary emphysema as a cause of the patient's dyspnea.

Pulmonary function studies in these patients are summarized in Table 4. In most of them the vital capacity was reduced, although in one it was 82 per cent of normal and in another it was normal. The residual volume was usually increased. The distribution of inspired air was signally uneven. There was a very severe limitation of the maximal breathing capacity and maximal expiratory flow rate. Pulmonary diffusing capacity was impaired. The arterial blood was studied in six patients, and five of them were found to have pulmonary insufficiency for oxygenation and for carbon dioxide elimination.

Some of these patients have been followed for five years. The course is progressive. The disease is not reversible. Treatment of secondary infections has been helpful. Steroid treatment has not helped.

DISCUSSION

The clinical findings in 12 women, all with classic pulmonary emphysema, have been presented. None had evidence of antecedent bronchiectasis, tuberculosis or silicosis. None had bronchial asthma. Only two of the 12 complained of cough first and of shortness of breath later. On the contrary, most noticed shortness of breath first and began coughing later. Many became aware that they had lung disease because of recurrent attacks of bronchitis. One woman had no symptoms suggestive of lung disease, and it was only when she developed headaches and papilledema that the basic disease was diagnosed. In another woman the disease was diagnosed while she was a patient in the hospital for treatment of an ovarian cyst.

These were relatively young women with what appears to have been primary pulmonary emphysema. Only three were older than 50 when first seen. One patient, age 31, had extremely severe disease. Fibrocystic disease was excluded mainly on the basis of clinical evaluation. None had the gastrointestinal symptoms which accompany fibrocystic disease. Sweat chlorides in patients DT, MF and EB were normal.

These women closely resembled the young men on whom we reported in 1962.[2] In our previous paper we briefly discussed our concepts concerning the etiology of pulmonary emphysema. We do not believe that emphysema begins with chronic

TABLE 2
PHYSICAL FINDINGS

Patient	Nasal Signs	Chest: Antero-Posterior Diameter	Chest: Expansion	Chest: Breath Sounds	Chest: Adventitial Sounds	Heart: Normal Sinus Rhythm	Heart: Size: Mid-Clavicular Line	Heart: Aortic Second Sound : Pulmonic Second Sound	Heart: Murmurs	Heart: Tones	Blood Pressure (mm. Hg)	Liver	Ankle Edema
E.B.	0	Normal	Decreased	Decreased	Few Rales	+	+	$P_2 > A_2$	Grade III Systolic Apex	Clear	100/60	0	1+
H.N.	0	Increased	Normal	Decreased	0	0	+	$A_2 > P_2$	0	Clear	150/80	0	0
A.B.	0	Increased	Decreased	Decreased	Few Wheezes	+	+	$P_2 = A_2$	0	Distant	130/80	0	1+
M.F.	0	Normal	Decreased	Decreased	Few Wheezes	+	+	$A_2 > P_2$	0	Clear	130/90	0	0
M.B.	0	Normal	Decreased	Decreased	0	+	+	$A_2 > P_2$	0	Distant	140/80	0	0
L.F.	0	Normal	Decreased	Decreased	0	+	+	$A_2 > P_2$	0	Distant	120/80	0	0
W.D.	0	Normal	Normal	Clear	0	+	+	$A_2 > P_2$	0	Distant	130/90	0	0
H.G.	0	Increased	Decreased	Decreased	0	+	+	$A_2 = P_2$	0	Distant	105/65	0	0
J.H.	0	Normal	Decreased	Decreased	Few Wheezes	+	+	$A_2 = P_2$	0	Distant	110/80	0	0
J.K.	0	Normal	Decreased	Decreased	Few Rales	+	+	$A_2 = P_2$	Grade I Systolic	Clear	140/85	0	0
D.T.	0	Normal	Decreased	Decreased	0	+	+	$A_2 = P_2$	0	Clear	120/100	2 Fb	1+
B.A.	0	Increased	Decreased	Decreased	0	+	+	$A_2 = P_2$	0	Clear	100/60	0	1+

0 = No
+ = Yes

TABLE 3
LABORATORY FINDINGS

Patient	Hemoglobin (GM/100 ml)	White Blood Count (Cells/mm³)	Eosinophils	Chest Roentgenogram: Prominent Pulmonary Artery	Chest Roentgenogram: Increased Radiolucency of Lung Fields	Chest Roentgenogram: Flat Diaphragms	Chest Roentgenogram: Cysts	Chest Roentgenogram: Heart Size
E.B.	15.2	7,750	0	+	0	0	0	Normal
H.N.	14.0	12,300	0	0	+	+	0	Normal
A.B.	14.0	13,750	3	0	+	+	+	Normal
M.F.	15.2	13,250	3	0	0	0	0	Normal
M.B.	11.0	4,200		+	+	+	0	Normal
L.F.	15.0	4,400	0	0	0	0	0	Normal
W.D.	14.5	18,500	0	+	+	0	0	Normal
H.G.	14.5	8,550	0	+	+	0	+	Normal
J.H.	14.0	11,700	3	+	+	+	+	Normal
J.K.	16.3	7,900	0	0	0	0	0	Normal
D.T.	15.7	8,800	1	+	+	+	0	Normal
B.A.	15.5	8,800	3	0	0	0	+	Normal

0 = No
+ = Yes

TABLE 4
PULMONARY FUNCTION TESTS

Patient	Lung Volumes: Vital Capacity (ml.)	Lung Volumes: Vital Capacity (% PN)	Lung Volumes: Residual Volume (ml.)	Lung Volumes: Residual Volume (% PN)	Alveolar Gas Distribution: 7 Min. Wash Out (% N_2)	Alveolar Gas Distribution: Single Breath N_2 Test (% N_2)	Mechanical Tests: Maximal Breathing Capacity (L/min)	Mechanical Tests: Maximal Breathing Capacity (% PN)	Mechanical Tests: Maximal Expiratory Flow Rate (L/min)	Mechanical Tests: Inspiratory Flow Rate (L/min)	Diffusion (ml. CO/mm.Hg/min)	Diffusion (% PN)	Arterial Blood Studies: O_2 Saturation (%)	Arterial Blood Studies: P_{CO_2} (mm. Hg)
E.B.	2,120	68	2,620	276	6.5	10.4	19	24	24	110	14	64	82	64
H.N.	2,250	74	2,760	114	3.0	6.7	32	36	34	160	11	50	94	39
A.B.	1,370	43	3,720	153	9.6		13	18	5	88	10	44	77	60
M.F.	3,060	100	930	100	15.0	11.9	29	35	29	170	8	36		
M.B.	1,520	55				6.2	19	34	13	94				
L.F.	1,670	51	2,310	231	6.6	9.3	16	21	14	80	13	54	80	70
W.D.	2,630	82				11.6	36	44	65	250				
H.G.	2,020	70				5.0	31	44	21	250				
J.H.	780	31							12	52				
J.K.	2,490	78	2,130	220	1.7	8.1	33	42	40	220	13	57		
D.T.	700	24							9	78			72	68
B.A.	1,800	60	1,190	129	8.9	8.9	33	45	8	84			84	53

bronchitis. According to the accepted hypothesis, inflammation in the bronchi leads to bronchial changes, overdistention of lung tissue and, eventually, to destruction of the alveolar capillary membrane, but it seems to us that the results of our study do not support that hypothesis. Our patients' lungs appeared to have been destroyed by the emphysema, and only after characteristic tissue changes had occurred did secondary infection develop. We realize that this postulate is speculative, but in explaining the cause of emphysema it is important to bear in mind that persons of both sexes can be affected by this disorder and that it can develop in early adult life.

Some investigators[3, 4, 5] believe that smoking produces a toxic change in the lungs and is one of the causative factors in pulmonary emphysema. Ten of the 12 patients in our series were smokers. Smoking may have some importance, but it would appear to be no more than one of several factors that cause this disease, for the reported cigarette consumption does not relate quantitatively to its development. Some of the women in this series were young and had only a few "pack years" in their experience. Some older women with several times as much exposure have normally functioning lungs.

SUMMARY

Observations have been presented on 12 women with severe pulmonary emphysema. The fact that emphysema can occur as a primary disorder in young women has been emphasized. Physical examination will reveal slow expiration and an absence of breath sounds at the bases. The chest roentgenogram does not constitute an accurate diagnostic aid, for it may be normal despite advanced emphysema. Pulmonary function studies are diagnostic and will document an increased residual volume, an uneven distribution of inspired air, a severe restriction of maximal breathing capacity, and of maximal expiratory flow rate.

A satisfactory explanation of the cause of emphysema must include the fact that it is a disease of both men and women.

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 449

SUMMARY OF CLINICAL FINDINGS

A 34-YEAR-OLD WHITE MALE laborer was hospitalized because of a sudden loss of consciousness at 8:30 a.m. at his place of employment. No convulsions were reported, and he had presumably been well when he reported for work that morning. He had been working steadily, and had had no specific complaint. However, his wife said that for several years he had experienced difficulty in coordinating his movements, and often had swayed from side to side while walking. He had also complained of difficulty in seeing at night, and of a loss of hearing. The hearing loss, in the past, had been attributed to infections. A growth of an unknown type had been removed from the rectum four years previously.

Lumbar puncture had been performed at the time of his admission to a local hospital shortly after the onset of his illness. The opening pressure was reported to have been 540 mm. H_2O, and the spinal fluid had been described as grossly bloody. After centrifugation, the supernatant fluid had been xanthochromic. During the ensuing seven hours no change in the patient's level of responsiveness had been apparent, but a right hemiparesis had developed, and his respirations had become irregular.

He was transferred to University Hospitals 14 hours after his loss of consciousness. On physical examination the blood pressure was 170/90 mm. Hg, and the pulse rate was 100/min. and regular. The respirations were irregular and of the Cheyne-Stokes variety. The patient was unresponsive except for occasionally withdrawing his left leg in reaction to painful stimuli. He made no attempt to defend himself.

The pupils were 4 mm. in diameter bilaterally, and they did not react to light. The eyes were fixed in forward gaze. The patient did not respond to corneal stimulation. The optic fundi were normal, and no papilledema or hemorrhages were noted on ophthalmoscopic examination.

The muscle stretch reflexes of the upper and lower extremities were symmetrical in response, and normal. However, extensor plantar responses were present bilaterally. The neck was supple. The carotid pulses were present, and no bruits were audible. The lungs were clear to auscultation and percussion. The heart was not enlarged to percussion, and no murmurs were heard. The abdomen was soft, and no masses were felt. No evidence of trauma was noted, and there were no petechiae or skin rash. The hemoglobin level was 13.5 Gm. per cent, and the white blood cell count was 14,000/cu. mm.

Skull roentgenograms were interpreted as showing a calcified midline mass arising from the region of the tuberculum sellae, with some destruction of the posterior clinoid processes. The pineal was calcified and displaced backward. The left petrous ridge was destroyed, and the right internal auditory meatus was enlarged. Carotid angiography was attempted. Although the cervical carotid arteries were satisfactorily cannulated, the intracranial vessels could not be visualized, despite repeated injections.

Artificial respiration became necessary when spontaneous respiration ceased. Ephedrine was given to maintain blood pressure.

Three hours after the patient's arrival at University Hospitals, 60 cc. of dark blood mixed with necrotic brain tissue was evacuated through a left frontal burr hole. Following that procedure, the systolic blood pressure rose from 40 to 120 mm. Hg. Spontaneous respirations did not return, and he remained totally unresponsive. He died four hours after the operation.

CLINICAL DISCUSSION

Dr. R. F. Sheets, Internal Medicine: This, the 449th College of Medicine CPC, concerns a 34-year-old man who suddenly became comatose. The protocol will be discussed on behalf of the junior ward clerks by Mr. Asby.

Mr. D. Asby, junior ward clerk: In view of this patient's brief history and physical findings, we have formulated the following differential diagnoses. Number one is a ruptured internal carotid aneurysm. It correlates with the man's long history of minor symptoms and with his sudden onset of illness and death. The gross blood found on lumbar puncture is also a strong indication of this entity. Progressive enlargement of the aneurysm would account for the displacement and destruction of structures; however calcification of an aneurysm is a man 34 years old is questionable.

Possibility number two is a neoplasm. Although this man did not present the classic symptoms of a tumor, such as a progressive neurologic deficit, a tumor could not be ruled out, especially with the calcified midline mass and the structural destruction. The tumors that most frequently calcify are the astrocytomas, oligodendrogliomas, craniopharyngiomas and the meningiomas. Another tumor to be considered is the acoustic neurinoma. It would account for the hearing loss, the cerebellar signs and the enlarged internal meatus. However such tumors are usually unilateral, and they do not calcify.

If we must select just one of these two diagnoses, we feel that a ruptured internal carotid aneurysm is the more likely.

Dr. Sheets: Dr. George Perret, of the Division of Neurosurgery, will discuss the protocol for the staff.

Dr. G. E. Perret, Surgery: We have just heard many tumors listed. If Mr. Asby had named a few more of them, he would have given us a good synopsis of all the intracranial tumors. However, I don't think he solved the patient's problems.

In this case we find a number of syndromes fairly typical of various forms of intracranial pathology, and they all have been quite well documented. According to the history, the patient had experienced difficulty in coordinating his movements for several years, and had swayed from side to side while walking. This loss of coordination of movements and gait suggests some disturbance in the posterior fossa of the cerebellum, or of the pathways that link the cerebellum to the brain.

The patient had also complained of difficulty in seeing at night. This symptom is somewhat more difficult to assess. Many people with various types of eye diseases have difficulty with vision at night. However, one would think that this man could have had some visual-field disturbances. These could have been caused by any type of pressure exerted directly or indirectly on the optic nerves, optic chiasm or optic tracts. On the other hand, the loss of hearing that he experienced would fit, again, with some pathology in the posterior fossa. Tumors of the acoustic nerve commonly produce loss of hearing and disturbance of coordination.

When lumbar puncture was performed, at the time of his admision to a local hospital, the pressure was 540 mm. H_2O, and the spinal fluid was grossly bloody. After centrifugation, the supernatant fluid was xanthochromic. A pressure of 540 mm. H_2O is much too high, for the normal pressure varies between 100 and 180 or 200 mm. H_2O. Most patients who have had a massive subarachnoid hemorrhage have increased intracranial pressure and increased spinal-fluid pressure. This man obviously had had a subarachnoid hemorrhage, for blood was found in his spinal fluid. The fact that the supernatant fluid was xanthochromic after the solid particles of the blood had been centrifuged out suggests that the hemorrhage had occurred at least three hours before the spinal puncture was performed. Within three hours after hemorrhage, xanthochromia may be present. It deepens for 24 to 48 hours after the hemorrhage, and then gradually recedes again.

It was noted that the patient had a right hemiparesis and that his respirations had become irregular. The right hemiparesis suggests involve-

ment of the long tracts on the left side. Irregular respiration is found frequently in any of a large number of diseases, but it occurs fairly regularly in diseases accompanied by increased intracranial pressure, and in diseases involving the brain stem.

The subarachnoid hemorrhage and the symptoms and signs that we have just discussed could fit a hemorrhage from a ruptured aneurysm, and according to what we have found thus far, the aneurysm ought perhaps to be somewhere in the posterior fossa—let's say on the vertebral or the basilar artery. The symptoms could also have resulted from a rupture of an arteriovenous malformation in the cerebellum, or they could fit a hemorrhage within a tumor and a subsequent rupture of the hemorrhage through the tumor into the subarachnoid space or the ventricles. This latter is seen quite frequently in gliomas in the posterior fossa or in the brain stem, as well as in the cerebrum.

On physical examination, the blood pressure was found to be 170/90 mm. Hg, and the systolic and diastolic pressures thus were higher than they should be in a 34-year-old man. The respirations were irregular and of the Cheyne-Stokes variety. The patient was unresponsive. These three signs —high blood pressure, Cheyne-Stokes respirations and loss of responsiveness—are bad prognostic signs. They suggest that the patient is in very poor condition, and if the Cheyne-Stokes respirations increase, one can almost invariably expect death.

The facts that the patient's pupils were dilated and fixed, and that they did not react to light, constitute another ominous sign. His eyes were fixed in forward gaze, and there was no response to corneal stimulation. These findings suggest to me that the patient's brain was already dead. A patient with fixed, dilated pupils, a forward-fixed gaze, no corneal reaction, unresponsiveness to all stimuli, and Cheyne-Stokes respirations—such an individual, to me, is a dead patient. His heart may still beat, his lungs may still function and his other functions may continue, but his main cerebral functions have stopped.

This man had extensor plantar responses bilaterally. His neck was supple. Usually one would expect neck rigidity with a massive subarachnoid hemorrhage; however this man was so far gone that the muscle reflexes producing neck rigidity had already been abolished.

Skull roentgenograms showed a calcified midline mass arising from the region of the tuberculum sellae, with some destruction of the posterior clinoid processes. A calcified mass arising from the tuberculum sellae is fairly typical of meningiomas of the tuberculum sellae. Meningiomas arising from the floor of the anterior cranial fossa, from the sphenoid ridges or from the tuberculum sellae are usually avascular tumors which often calcify and which contain a large amount of fibrous tissue. The destruction of the posterior clinoid processes indicates no more than atrophy secondary to pressure. It is not pathognomonic for anything, and it does not help us in the diagnosis.

The pineal was calcified and displaced backward. All midline tumors which lie anterior to the pineal gland will displace the pineal backward. Unfortunately, we see the pineal in x-ray films only when it is calcified. It was lucky for the physician that the pineal was calcified in a patient 34 years of age, for it helped him in making a diagnosis of a tumor lying anterior to the pineal.

The left petrous ridge had been destroyed, and the right internal auditory meatus was enlarged. Destruction of the petrous ridge is found frequently with tumors involving the cerebellopontine angles, and the enlargement of an internal auditory meatus also localizes a tumor in the same region. Acoustic-nerve tumors may often start within the porus acusticus and slowly and gradually enlarge the auditory meatus before they grow farther and farther into the posterior fossa. The more they grow, the more they are likely to destroy portions of the petrous ridge. Therefore, one can conclude from these x-ray findings that the patient probably had bilateral acoustic-nerve tumors. Other tumors that can produce the same destruction in the same region are the meningiomas and cholesteatomas, but the neurofibromas are the most common.

So up to now we have found that the patient probably had three tumors—one arising from the tuberculum sellae, and one in each cerebellopontine angle probably arising from the acoustic nerves.

Carotid angiography was attempted, but the intracranial vessels could not be visualized despite repeated injections. I should assume that the common carotid was probably seen, that the external carotid and that the internal carotids were probably seen up to the siphon—that is, up to the portion where the internal carotid enters the middle fossa or enters the cranium or passes through the dura. From there on, one doesn't see the vessels because of the increased intracranial pressure. With a severe increase in pressure, the arterial and venous circulations in the brain are greatly disturbed, the vessels fill very slowly and with difficulty, and the arteries seem much thinner than they normally are.

Following angiography, spontaneous respiration ceased. We expected that from the beginning. Blood and necrotic tissue were aspirated through a left-frontal burr hole, and eventually the patient died.

The cause of death in this case was hemorrhage. The cause of the hemorrhage, I do not know. It would be a bit reckless for me to assume that the patient had an A-V malformation and an aneurysm, together with the other three tumors. I am fairly certain that he had a meningioma—perhaps three meningiomas—or a meningioma and two acoustic-nerve tumors. These are not uncommonly seen in von Recklinghausen's disease. You know

that in von Recklinghausen's disease one may have multiple neurofibromas involving the nerve roots in the spinal canal and involving the cranial nerves. One may have single or multiple meningiomas; one may have cerebral or intramedullary gliomas. All of these may be associated with syringomyelia, and one can have a multiplicity of central nervous system changes. Usually, von Recklinghausen's disease is familial, but here we have no such history.

The heroic measure that was carried out on a practically dead patient was done in the hope of saving the young man's life. If the blood and/or pus could have been evacuated, the procedure might have been lifesaving, and I believe it should be attempted whenever an intracranial accumulation of blood or accumulation of pus is suspected.

The cause of the hemorrhage is still unknown, and from here on whatever I say is just guesswork. Frequently we see patients with brain hemorrhage within the tumor. A sudden hemorrhage of this sort increases the mass of a tumor, acutely increases the intracranial pressure, and can precipitate all the symptoms that this patient exhibited. Usually the calcified meningioma does not bleed, however, and it is rare to find large hemorrhages in acoustic-nerve tumors. So I assume that the patient did not hemorrhage from within any of these tumors, but hemorrhaged from another source.

I don't know what else could have been done to save this patient's life. My final diagnosis is intracranial hemorrhage, a severe increase in intracranial pressure, and multiple tumors.

Figure 1. Lateral-view left carotid arteriogram showing dye in internal carotid artery (lower arrow) and calcified mass (upper arrow). There is no filling of the intracranial vessels. The pineal is calcified and displaced backwards (right arrow).

Dr. Sheets: Dr. Pribram, would you like to show us the x-rays?

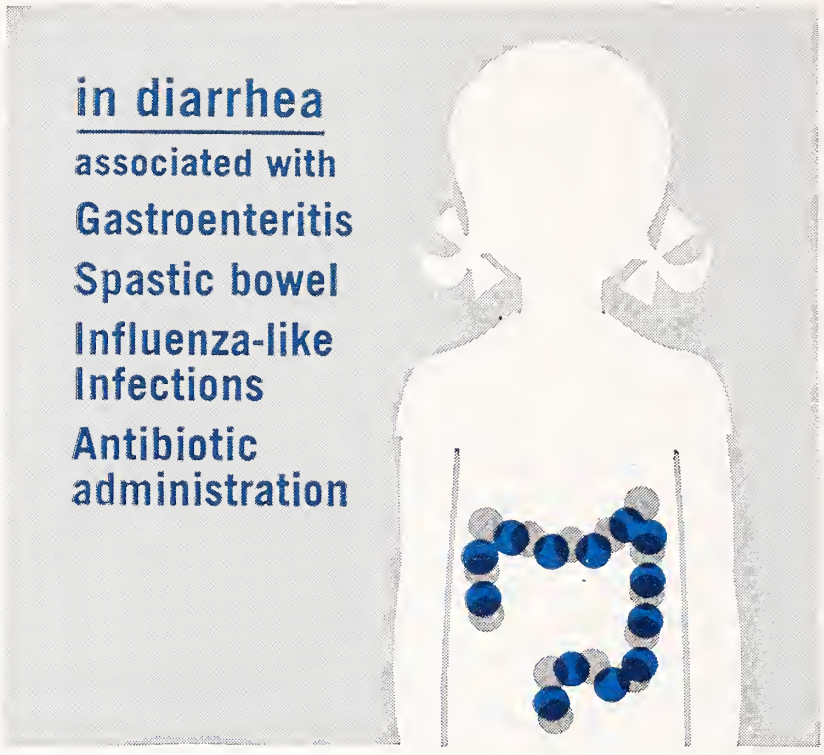
Dr. H. F. W. Pribram, Radiology: I'm at a little bit of a disadvantage. In the first place, the radiologic findings have already been discussed. Second, someone has walked off with the x-rays, and third, you have heard that the arteriogram wasn't any good. So I really am not quite sure why I am standing before you. However, I did manage to salvage a little of what was left, and here is the arteriogram which you heard didn't show anything.

On the lateral film of the arteriogram, you can see the calcified mass that everybody has been talking about. By and large, I don't try to determine what such masses are, for intracranial calcification can result from almost anything. It could be due to an aneurysm, as has been mentioned, but it is rather too densely calcified. Therefore, I don't think it is an aneurysm. You will see later that it is midline, and I agree that it is a tuberculum sellae meningioma (Figures 1 and 2).

Calcification in the head is not specific for any tumor. There are exceptions to that generalization, in that craniopharyngioma calcification tends to be curvilinear, but so does the calcification in aneurysms. You will see that there is some dye in the internal carotid artery, and some dye in the external carotid artery and in the superficial temporal artery (Figures 1 and 2).

There are a number of reasons why one may fail to get filling of intracranial vessels. Number one is a technical error. If one doesn't inject the dye in the right place, it won't go into the head. For instance, if you inject it into the wall of the artery, it won't go up into the head. In this case the puncture was a good one. I checked the films, and since the needle was in good position, we can eliminate that as a cause.

Figure 2. Antero-posterior-view left carotid arteriogram showing internal carotid artery (lower arrow), calcified midline mass (upper arrow) and abnormal internal auditory canals (left and right arrows). There is no filling of the intracranial vessels.



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Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholinobutyryl-pyrrolidine and Related Amides. Part 1: Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. 9:381-400 (June) 1957.

2. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta Gastroent. Belg. *21*:674-680 (Sept.-Oct.) 1958.

SEARLE

Research in the Service of Medicine

The second cause is occlusion of the intracranial internal carotid artery. Dye won't flow if there is occlusion in the carotid siphon. If one takes serial films for a very long time, he will be led to the point of occlusion. There isn't enough flow to take the dye away. Well, in this case, I don't think there was occlusion of an intracranial vessel.

A third cause is increased intracranial pressure, and I'll discuss that further in a little while. Another cause would be spasm of an intracranial vessel, and I'll discuss that further, too, in a moment. Here you can see the arteriogram in the AP projection. Here is the central calcified mass. In addition, the internal auditory canal on this side is enlarged. You cannot see the one on the other side very well, but it also is abnormal. The changes could be due to acoustic neuromas or to further meningiomas. Thus, of course, the diagnosis is central neurofibromatosis. These patients do not need to show any external stigmata of neurofibromatosis. Patients with multiple intracranial tumors usually do not have the external stigmata of that disease. Furthermore, there may be lots of these tumors—more than we have seen already. There may be thousands of meningiomas sitting along the falx and in the posterior fossa, and any of them could have bled. Or there could be acoustic neuromas. Or there could be a few other tumors which we haven't seen because the vessels have not filled.

I'd like to discuss why these vessels don't fill. Here is an arteriogram in another patient with subarachnoid hemorrhage, and you can see how thin the internal carotid artery appears to be. Everybody talks about spasm. Anytime anything is narrowed, it is due to "spasm." Colons are spastic; vessels are spastic; minds are spastic; and everything else. In actual fact, this is not a result of spasm. The extradural internal carotid artery is very rarely thus affected. The only time it will go into spasm is when it has been mistreated, and we said that the artery had not been ill treated. This narrowing is actually an artifact due to the layering of dye on the posterior wall of the internal carotid artery. You will note that the patient had been intubated and was under artificial respiration.

Here is a series of patients whom I investigated some years ago[1] in an attempt to find out why these vessels wouldn't fill (Table 1). In each of these cases, the puncture was perfect. In the first group of patients, all were being artificially respired. In this column you see the blood pressures. These are the final diagnoses, and you see that the majority had intraventricular hemorrhage. The reason is that intraventricular hemorrhage is one of the best ways of increasing intracranial pressure rapidly. So the non-filling of intracranial vessels is associated with an *acute* increase in intracranial pressure, not a chronic one. In the same way, Cushing's triad of increasing blood pressure, slowing of the pulse and irregular respiration is associated with rapidly increasing pressure.

It seemed at first that this phenomenon occurred only in cases of intraventricular hemorrhage when the patients were in respirators. Consequently, we decided to see whether it would happen to patients who were not being artificially respired. This is the second group, but they all had hemorrhages, either intraventricular or subarachnoid. You will see that there was one conscious patient. He really doesn't belong there. People like this don't survive. Finally, we wanted to find lesions where intraventricular hemorrhage was not the cause of the rapidly increasing pressure, and the third group is shown here. The final case, I'll discuss in detail in a little while.

What happens in increased intracranial pressure? Provided that the cardiac output remains constant, the pressure can go on rising until it hits the mean arterial pressure which is 1,300 mm. Up to that point, no change in blood pressure, respiration or pulse rate takes place. But at 1,300 mm. there is a sudden increase in cardiac output, and there is an increase in blood pressure. There comes a time when the intracranial pressure rises, the cardiac output cannot rise any more, and, therefore, perfusion of the intracranial vessels ceases. That is the point that these patients reached.

TABLE I

ACUTE INTRACRANIAL HYPERTENSION

Age	Sex	Blood Pressure	Condition	Diagnosis
25	F	140/75	Respirator	Intraventricular Haemorrhage
28	F	90/60	Respirator	Intraventricular Haemorrhage
28	M	160/100	Respirator	Intraventricular Haemorrhage
49	M	180/90	Unconscious	Intraventricular Haemorrhage
41	M	140/90	Unconscious	Subarachnoid Haemorrhage
42	M	150/100	Conscious	Intraventricular Haemorrhage
26	F	165/110	Unconscious	Intraventricular Haemorrhage
51	F	170/60	Respirator	Subarachnoid Haemorrhage
49	F	200/90	Unconscious	Subdural Haemorrhage
2½	F	142/70	Unconscious	Temporal Lobe Abscess
22	F	50-60	Respirator	Intraventricular Haemorrhage

The next slide illustrates the layering of the dye. Here's an internal carotid-artery injection. Here is the needle in good position. The patient is in a respirator. The internal carotid artery is filled with dye, and here it narrows. One might interpret this finding as "spasm," except for the fact that this is a "waterfall," and the dye is just falling down and layering in the more posterior part of the internal carotid artery. This is what happens to the vertebral circulation in these cases. The basilar artery does not fill. You will see that the sutures are spread, and therefore there is evidence of increased intracranial pressure. Both vertebral arteries are filled, and thus one knows that there was nothing wrong with the injection. The fact that one can see the posterior inferior cerebellar artery below the foramen magnum implies tonsilar herniation.

Now if what I have said is true, it should follow that if one relieves the intracranial pressure, he can restore filling of the intracranial vessels. We shall see in a moment whether this can be done. Next slide. Here's a patient who came in one evening, and like all these patients, she wasn't very well. She had a right hemiplegia. You can see some dye in the internal carotid artery and the normal filling of the external. This finding is pathognomonic in these patients. The quickest way to relieve intracranial pressure in these cases is to make a burr hole and tap the ventricles. In this case, the obvious ventricle to tap was the right lateral ventricle, for the pathology was on the left. You can see that there was no filling of the intracranial vessels, even though we took films until very late. The arteriogram needle was left in place, and then the ventricles were tapped. In this next slide you can see the ventricular needle in the right lateral ventricle. The ventricular needle was left in place, and the arteriogram was repeated under the same conditions as before. Now you can see there was rich filling of the intracranial vessels, and here is an angiomatous

Figure 3. Dura and falx cerebri with multiple meningiomata.

Figure 4. Meningioma arising in mid-line of frontal fossa compressing olfactory tract.

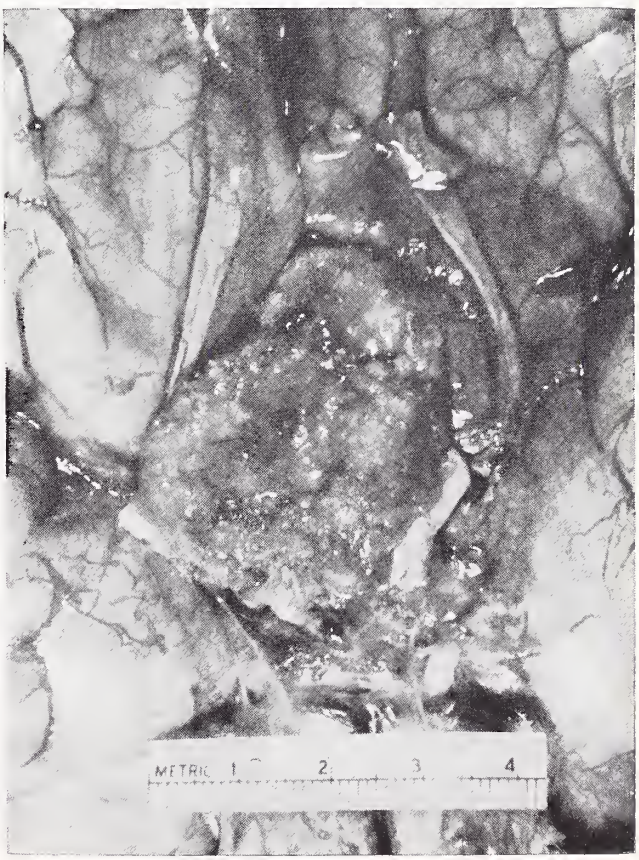


Figure 5. Close-up of the olfactory groove meningioma.

malformation within the left lateral ventricle. This proves, as far as I am concerned, that these changes are due to raised intracranial pressure, for if one relieves the intracranial pressure, he gets filling of the vessels. It doesn't mean that he restores the patient to life, although he should bear that possibility in mind.

The conclusion in the case we have been discussing today is, first of all, that the patient had neurofibromatosis. He had either two acoustic neuromas, or one meningioma and perhaps other tumors. A patient with neurofibromatosis frequently has other congenital abnormalities, and this man may well have had them.

Dr. Sheets: Dr. McCormick, will you tell us what you found at autopsy?

Dr. W. F. McCormick, Pathology: This patient was a veritable museum, and it is almost easier to say what we didn't find than what we did find. Both Dr. Perret and Dr. Pribram quite correctly pointed out that this is neurofibromatosis of a type normally called "central." The patient had no cafe-au-lait spots or peripheral neurofibromata, except that the lesion removed from the rectum four years previously was a neurofibroma of the myenteric plexus. These are quite rare.

Figure 3 is a photograph of the dura and falx cerebri, showing at least a few of the neoplasms associated with the intracranial dura. The patient had a very large number of these meningiomas. The next illustration (Figure 4) demonstrates the ventral surface of the brain. There is a large midline meningioma. It is a little difficult to know what to call it. We've called it an olfactory-groove meningioma, but I wouldn't argue with anyone who wanted to place it a little farther back and call it a tuberculum meningioma. This tumor was predicted by Dr. Perret and Dr. Pribram. Figure 5 is a closeup of this lesion, which displaces the gyri recti and the olfactory tracts.

There was a fresh subarachnoid hemorrhage in this patient, as well as hemorrhage elsewhere. There were bilateral acoustic neurinomata, and they were quite large in this patient (Figures 4 and 6). In addition to the bilateral VIIIth-nerve tumors, he had bilateral Vth-nerve tumors, a left VIth-nerve tumor, and a right IXth-nerve tumor. The patient also had an intraventricular meningioma arising in the choroid plexus of the right lateral ventricle (Figure 7). You can also see a small area of necrosis and hemorrhage, which can be seen in Figure 6. Here is the area of hemorrhage with associated necrosis and infarction. There was an enlargement of the right hemisphere and a collapse of the ventricular system bilaterally—somewhat more pronounced on the right. There was blood in the ventricular system (Figure 8).

The patient had massive cerebral edema and

Figure 6. Bilateral cerebellopontine angle (N. VIII) Schwannomas.

multiple brain hernias. The cervical spinal cord was involved by a syrinx. You will notice the syringomyelia that is present, with the dense gliosis of the wall of the syrinx, and an ependymoma lying ventral to and in association with the syrinx (Figure 9). In the medulla there was one of the so-called central Schwannomas or "tubers." This type of lesion apparently is made up of primarily neoplastic astrocytes, although it is debatable whether they are oligodendroglia cells or the central counterpart of the Schwann cell. They are normally accepted as astroglial, and I believe they are. A small nodule was present in the medulla (Figure 10). This lesion was identical to that found in one of the other neurocutaneous syndromes—tuberous sclerosis.

Table 2 is a woefully incomplete list of the types of lesions associated with von Reckling-

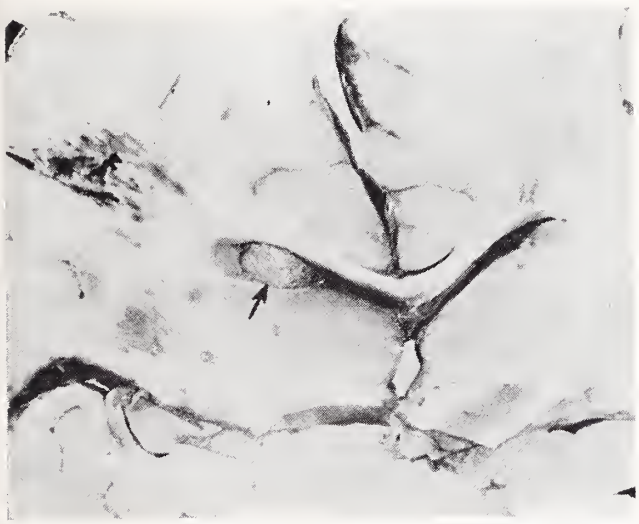


Figure 7. Intraventricular meningioma of right choroid glomus (arrow). Sides reversed in photograph.

TABLE 2

TYPES OF LESIONS ASSOCIATED WITH VON RECKLINGHAUSEN'S NEUROFIBROMATOSIS

Cutaneous Pigmentations—Cafe-Au-Lait Spots—95 Per Cent
Neurofibromata; Peripheral and Central (Cranial) Nerves—80-90 Per Cent
Bony Lesions—Scoliosis/Pseudarthrosis/Hypertrophies/Atrophies—30 Per Cent
Schwannomas; Peripheral and Central—Very Common
Meningiomas—Common
Gliomas, All Types (+) (Most Often N. II Gliomas and Spinal Cord)—Common
Pheochromocytomas—Relatively Uncommon
Melanosis of C.N.S.—Rare
Hemangiomas—Relatively Common
Cystic Lung Disease—Rare
Syringomyelia (+)—Relatively Common

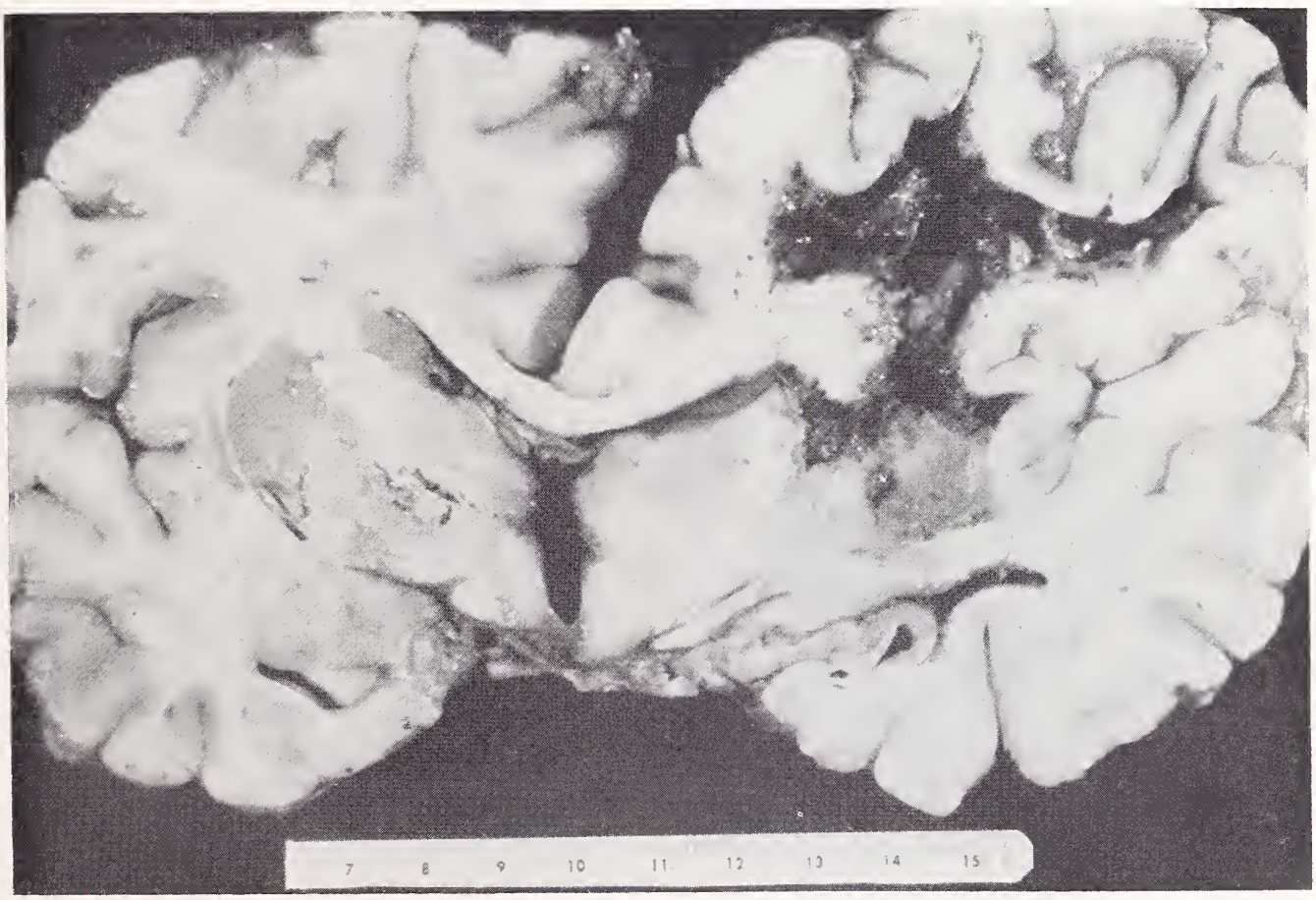


Figure 8. Large intraparenchymal hematoma and encephalomalacia.

hausen's neurofibromatosis. The cafe-au-lait spots are probably the commonest manifestation in any large series of these patients. The peripheral neurofibromata and the central neurofibromata and Schwannomas are also very common in this syndrome. There are bony lesions associated with von Recklinghausen's neurofibromatosis. You will remember that von Recklinghausen's name is attached to two syndromes, one primarily neurocutaneous and the other primarily osseous. In both, however, there are lytic lesions of bone, and I am now referring only to the neurofibromatous form. Meningiomas are very common, and the patient you see here is an example. Gliomas of all types may be found. We found a small astrocytic tumor, a little "tuber" if you wish, in the medulla, and we have an ependymoma in the cervical spinal cord in this patient. Gliomas of the optic nerve and of the spinal cord are the commonest ones. Pheochromocytomas are relatively uncommon, but have been described now in about 30 or 40 patients with von Recklinghausen's neurofibromatosis. That frequency is greatly in excess of what one would expect from a fortuitous concurrence of these diseases. There is also a very rare neurocutaneous syndrome either identical to or closely associated with von Recklinghausen's neurofibromatosis, in which there is diffuse melanosis of the leptomeninges. It is probably one of the rarest manifestations of the disease, but it can occur. Hemangiomas are relatively common, and this patient had a "cryptic" angioma of the mesencephalon. We did not demonstrate an angioma in association with the hemorrhage, but I suspect that it accounted for the bleeding in this patient. We know he had one that had not ruptured. Patients have also been described as having an interesting type of cystic lung disease, but this patient did not have it. He did have Löffler's syndrome, or eosinophilic granulomas of the lung. To the best of my knowledge, there is no association of Löffler's syndrome with neurofibromatosis. The patient had syringomyelia, which is a relatively common lesion in von Recklinghausen's neurofibromatosis.

The next few illustrations are from other patients, but they will demonstrate some of the commoner manifestations of von Recklinghausen's neurofibromatosis. The numerous cafe-au-lait spots can be seen quite well in this patient. The geneticists have pointed out that any time a patient has five or more such areas of pigmentation, he has, for all practical purposes, von Recklinghausen's neurofibromatosis. In addition, you see multiple subcutaneous nodules that are peripheral neurofibromata or, more often, just pure fibromata. Here is a photograph of a patient, taken from an English publication, showing some of the extensive types of pigmentary lesions that can be seen in von Recklinghausen's disease. There may be great redundancy of this pigmented skin—another form of melanosis seen in these patients.

Here are the optic nerve and optic chiasm from a patient with von Recklinghausen's disease; in fact, they are those of the man whose dorsal surface you saw earlier with the cafe-au-lait spots and neurofibromata. There is a diffuse glioma of the optic nerve. This is one of the commoner—probably the commonest—of the gliomas associated with von Recklinghausen's neurofibromatosis. This is a picture of still another patient, a patient whom Dr. Sahs saw some 20-odd years ago and who had classical von Recklinghausen's neurofibromatosis with many different tumors, both intracranial and intraspinal. It shows many of the neurofibromata associated with the roots of the cauda equina and with the filum terminale. All of these are relatively common manifestations of an all too frequent and lethal disease. This is the typical appearance of a Schwannian tumor. The so-called Antoni-A tissue makes up the majority of the neuromomas. It may form rather nice palisades. The other type of tissue seen characteristically in Schwannomas is the so-called Antoni-B, which has a much more loose-meshed and edematous appearance, and is very high in stainable free fat. Both types of tissue, apparently, are de-

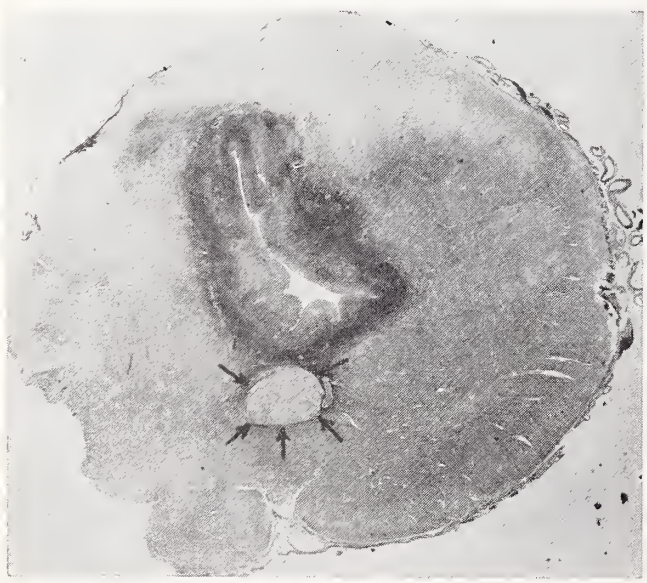


Figure 9. Spinal cord with syringomyelia and ependymoma (arrows) P.T.A.H. stain.

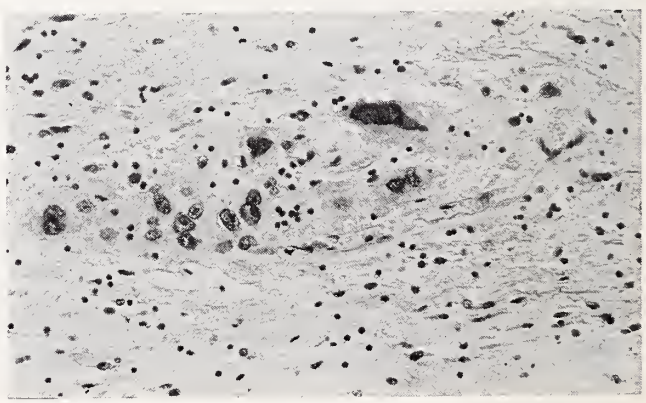


Figure 10. "Tuber" or "central schwannosis" in medulla.

rived from Schwann cells. The bulk of evidence for this statement comes from two sources—originally from Margaret Murray's tissue-culture studies at Columbia University a number of years back, and more recently from electron microscopy.

I shall show you a few charts and diagrams to illustrate some of the problems of medical genetics. This disease, and the neurocutaneous syndromes in general, illustrate some interesting concepts. Dr. Perret stressed that the patient had no family history of a neurocutaneous syndrome, though he had what we accept as a hereditary disease. How can this have come about? Obviously, one can have a spontaneous mutant. It probably occurs on the order of once in 10^8 or 10^{10} instances in man. It is uncommon, but of course we cannot rule it out.

Certain terms commonly used in genetics, such as "expression" and "penetrance," apply. For any syndrome there is, of course, the bell-shaped distribution curve with which all of us are familiar. The majority of patients with von Recklinghausen's neurofibromatosis will have obvious symptoms. They probably will have cafe-au-lait spots, peripheral neurofibromata, etc. There are, however, other affected patients who are much more difficult to diagnose, but who can still be diagnosed if one knows the total spectrum of the disease. The degree of severity of a disease is known as the "expression." "Expression" or "expressivity" is what the clinician refers to as the "degree of severity" of a syndrome or disease. There will be some affected individuals in whom the manifestations are so mild as to make the patient indistinguishable from normal people. These cases are examples of the *forme fruste* of the disorder. But other individuals will be severely involved. Very low expressivity, to the point of phenotypical normalcy, accounts for the incomplete penetrance of certain inherited disorders. Theoretically, at least (and, of course, it is factually, but we must say "theoretically" at this point), all affected individuals will be detectable whenever we discover a method that is absolute in its efficiency. For example, in the detection and classification of the hemoglobinopathies, we have now been able to push the threshold back to the zero point by means of such tools as electrophoresis. It cannot yet be done for many genetically-determined diseases such as von Recklinghausen's neurofibromatosis. The variability in the "expression" of a genetic condition is responsible for its "penetrance."

Another term which describes the entire group of neurocutaneous syndromes very well is "pleiotropism." When a single genetic lesion gives rise to a diversity of phenotypic expressions—i.e., complex syndromes—it is said to be "pleiotropic." It is likely that the gene has but one action, and that the apparent multiplicity of its effects is merely the result of its involvement in several processes of the single biochemical step.

Last, let us consider the concept of "penetrance." This phenomenon accounts for the so-called "skip generation." I think Figure 11 illustrates the concept of penetrance quite well. In some conditions that appear to be inherited as a dominant, a normal-appearing offspring of a person who possesses the trait may occasionally produce an affected offspring. It is thought that the "normal" transmitter really received the gene in question, but that for some reason, often environmental, it failed to find expression. We refer to such genes as "incompletely penetrant." Penetrance is usually considered an all-or-none affair, insofar as any one individual is concerned. Penetrance is a rather artificial concept, and as our ability to recognize the "skip generation" increases, it will no longer be significant.

In summary, this patient had a large number of the central stigmata of von Recklinghausen's neurofibromatosis—meningiomas, Schwannomas, astrocytomas, ependymomas, and angiomas. He died as a result of an intracerebral hemorrhage that has been presumed but not proved to have resulted from a cryptic vascular malformation.

Dr. Sheets: Do you have any questions for Dr. McCormick?

Audience: In the presence of so much intracranial pressure, why were there no ophthalmologic signs?

Dr. Perret: The patient was unconscious, as the first sentence in the protocol stated. We don't know whether he had any visual disturbances. All we know is that he had some difficulty in seeing at night. Perhaps he had some difficulty in seeing during the daytime, too, and perhaps he had visual-field disturbances of which he was unaware.

Dr. Henry E. Hamilton, Internal Medicine: There was no papilledema or change in the optic fundi, according to the examiner's report. Why?

Dr. Perret: Papilledema is usually a sign of chronic increased intracranial pressure that may arise after many, many weeks or months of gradually increasing pressure. Here the increase in pressure had been sudden and had been caused by the hemorrhage, not by the tumors.

Dr. Sheets: Dr. McCormick, what is the common denominator among all of these lesions? Is there one? What puts them all together? Why do you have a long list of what seem to me to be widely separated lesions occurring in one condition?

Dr. McCormick: Your question raises a very fundamental problem of human genetics. The common denominator appears to be some abnormality of the neuroectoderm or a derivative of the neuroectoderm. Our current concept of one gene : one polypeptide—or less sophisticatedly, one gene : one enzyme—leads us to the assumption that there is an enzyme fault in this disease that has not yet been detected. When it has been detected, we shall have pushed the "threshold" back to the zero level, as I have explained. I can say only that the common denominator, from a morphologist's point of view, must be some dysplastic, neoplastic,

hyperplastic abnormality of the neuroectoderm.

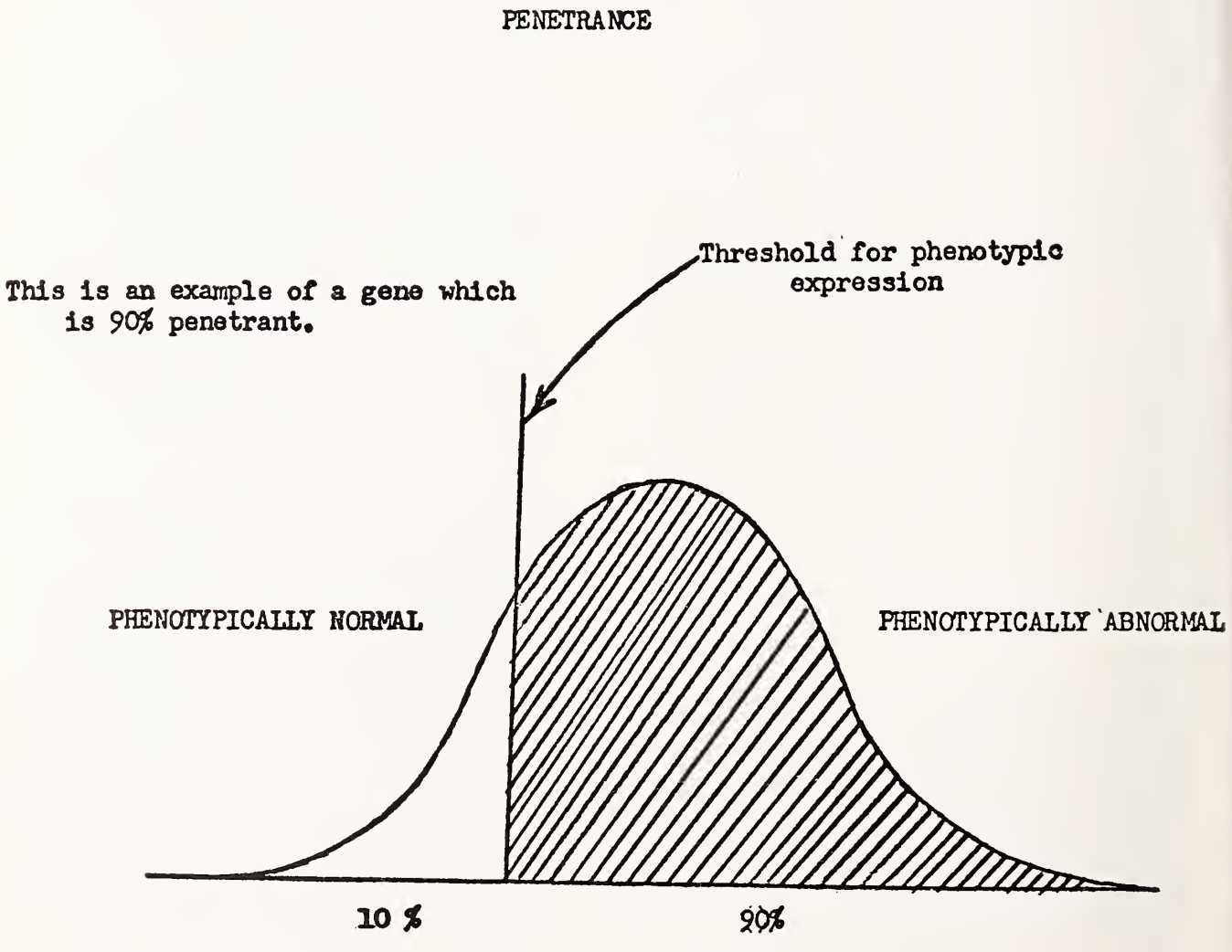
Dr. A. L. Sahs, Neurology: There are two points which I think should be emphasized. The first is that when a patient becomes very ill this quickly, the chances favor the impression that something has gone wrong in his brain—that is, in the hemispheres of the brain, or in the ventricular system, or in both. A lesion around the base of the brain is not so likely to cause this severe difficulty, nor is an ordinary subarachnoid hemorrhage likely to produce such dramatic clinical phenomena. The second point has been sufficiently alluded to, I think, but I might reiterate that in neurofibromatosis it is possible for one to have many lesions in the nervous system without exhibiting a single external symptom. I believe this is what happened in this particular case, and also in the young man whom Dr. McCormick described, who had many, many tumors in his nervous system without having a single external lesion.

Audience: Do the people with peripheral neurofibromas often have central ones?

Dr. McCormick: What do you mean by "often"? It usually means in 10 per cent or more of cases. I should say "Yes." If you are asking about the majority of cases? I honestly cannot answer. Patients may have only cafe-au-lait spots or other types of cutaneous pigmentation. They may have cutaneous and subcutaneous fibromata and neurofibromata, and pigmentary lesions. They may have peripheral neurofibromata and fibromata without pigmentation—all of these without central nervous system involvement. No one in the world has so far reported a large series of clinically and anatomically studied cases of von Recklinghausen's neurofibromatosis. Dorothy Russell, whose neuropathologic experience is probably unexcelled, was able—during a very long and productive lifetime—to compile data on no more than six patients.

Dr. A. S. Durosin, Neurology: Is the operative risk greater for the patient with multiple intracranial tumors than for one who has only a single tumor?

Dr. Perret: I think it depends upon the condition of the patient, and upon where the tumors are. If one tried to remove the meningioma in the



Gauss Distribution Curve

patient we discussed today, for instance, I think the operation would be especially difficult and dangerous because of a possible shift and compression of the brain stem by the neurofibromata. In general, if we have a patient with multiple brain tumors, we try to avoid operation if possible, and if we operate, we do so in order to save life by removing one or the other of the tumors that are causing the main difficulties.

SUMMARY OF NECROPSY FINDINGS

Anatomic diagnoses:

1. von Recklinghausen's neurofibromatosis.
2. Cerebral hemorrhage and infarction. fresh, massive.
3. Löffler's syndrome (pulmonary eosinophilic granulomas).

Students' diagnosis:

Ruptured internal carotid aneurysm.

Dr. Perret's diagnoses:

1. Multiple intracranial tumors.
2. Central neurofibromatosis.

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Raymond Blank Hospital Pediatric Conference

The Tenth Annual Raymond Blank Hospital Pediatric Conference will be held in the auditorium of the Iowa Methodist Hospital School of Nursing, in Des Moines, on April 7 and 8. The $30 registration fee includes luncheon tickets and one banquet ticket. For one day, the fee is $15. Physicians' wives are welcome to attend, and luncheon and banquet tickets can be bought for them at the registration desk. The program is acceptable for 11 credit hours by the American Academy of General Practice.

Thursday, April 7

9:15 a.m. "The Auto-immune Basis of Chronic Glomerulonephritis: Implications for Therapy," the Tenth Lee Forrest Hill Lecture—Clark D. West, M.D., University of Cincinnati

10:30 a.m. "New Virus Diseases: Differential Diagnosis and Management"—John M. Adams, M.D., University of California at Los Angeles

11:15 a.m. "Phenylalaninemia—A New Challenge"—Angelo M. DiGeorge, M.D., Temple University

2:00 p.m. CASE PRESENTATIONS—Raymond Blank Hospital residents

3:45 p.m. "Cardiac Failure in Infancy: Recognition and Treatment"—Edward R. Duffie, Jr., M.D., Children's Hospital Medical Center, Oakland

5:00 p.m. BUSINESS MEETING, IOWA BRANCH OF THE AMERICAN ACADEMY OF PEDIATRICS

6:30 p.m. SOCIAL HOUR AND BANQUET, Wakonda Club "Editorial Cartooning"—Frank Miller, DES MOINES REGISTER

Friday, April 8

9:00 a.m. "Blood Pressures in Infants: How and Why"—Dr. Duffie

9:45 a.m. CASE PRESENTATIONS—Raymond Blank Hospital residents

11:30 a.m. "Measles Encephalitis and Sequelae (Research on Etiology)"—Dr. Adams

2:00 p.m. "New Syndromes: Chromosomal, Genetic and Endocrine"—Dr. DiGeorge

3:00 p.m. "Recent Advances in the Diagnosis and Therapy of Pyelonephritis"—Dr. West

Editorials

A NEW USE FOR METRONIDAZOLE

A recent report of an unusual treatment of herpetic gingivo-stomatitis, herpangina and aphthous ulcers should be of great interest to clinicians. Though these conditions are usually encountered in the pediatric age group, they are not uncommon in adults. Recurrent aphthous ulcers occur in the pharynx and larynx, where they can be extremely painful and can interfere with swallowing. Lesions in the larynx can cause laryngospasm, can reduce the airway, and can produce breathing difficulties.

In general, the viral etiology of these lesions of the mouth and throat has been pretty well established. There has been considerable variation in the severity and duration of these infections. No definitive therapy has been available, and treatment has been supportive for the most part. In recent years, tablets containing Bacillus acidophilus and bulgaricus have been adminstered with some success, and antihistamines have been given by some physicians on the theory that the lesions may be of allergic origin.

McGuire and Goldberg* report success in the treatment of these lesions with metronidazole (Flagyl®, G. D. Searle & Co.). The drug is a known trichomonacide, and it is the drug of choice in the treatment of trichomonas vaginitis. They prescribed the drug in doses of half a tablet once or twice a day for children, depending upon their ages, for periods not exceeding three days, and they report rapid improvement in all their patients, though they have neglected to mention the number whom they treated thus. According to both the children and their parents, clinical improvement occurred after one or two doses of the drug.

They have not said what prompted them to attempt this unusual therapy for lesions of the mouth and throat, but one can guess that one of their adult patients may have had trichomonas vaginitis and aphthous ulcers of the mouth simultaneously. Trichomonas vaginitis is caused by Trichomonas hominis.

The Wichita physicians assert that their experience with the drug can neither be easily explained nor ignored. Trichomonas tenax has been found in the mouths of 10 to 20 per cent of some populations, and it is ordinarily considered a harmless commensal inhabitant of the mouth. The authors postulate a possible symbiosis of Trichomonas tenax and a herpes simplex virus which results in localized ulcerative lesions. Eradicating the trichomonas organisms permits more rapid recovery than could be expected following ordinary methods of treatment. If their hypothesis is to be substantiated, it will be necessary to demonstrate the presence of trichomonas in the lesions before treatments are started, and their absence after therapy. They plan further clinical investigations, and they urge other physicians to make similar efforts in order to support or disprove the efficacy of their unusual mode of treatment.

* McGuire, W. F., and Goldberg, H. R.: Viral stomatitis. J. KANSAS M. SOC., **46**:545, (Dec.) 1965.

TUBERCULIN TESTS FOR CHILDREN

A recommendation on the subject of tuberculin testing of children by a joint committee of the Section on Diseases of the Chest of the American Academy of Pediatrics and the American College of Chest Physicians* deserves the serious consideration of all physicians.

Despite all the efforts to eradicate the disease, and despite modern chemotherapy, tuberculosis in children continues to be a problem. The joint committee points out that since early treatment with isoniazid for patients converted from negative to positive reactors has proved highly successful, particularly in the very young, it is mandatory that tuberculosis testing be carried out early in life. It is strongly urged that the tuberculin testing of children be a routine practice for all physicians who treat patients of that age group. Initial tests should be done when children are between six and 12 months of age—before measles or smallpox vaccination—and then repeated annually up to four years of age and every two years thereafter, depending upon the prevalence of tuberculosis in the population group, and upon the child's risk of exposure.

The Mantoux test is recommended as the most accurate measure of tuberculin sensitivity. Intermediate P.P.D. (5 tuberculin units) is the standard test dose. The test is read on the second or third day, and the diameter of the area of induration should be measured and recorded. An indurated area 10 mm. or more in diameter constitutes a positive test.

The joint committee does not recommend patch testing. As a screening measure, a multiple-puncture test may be used, but any doubtful reactions should be checked by the Mantoux method.

When P.P.D. is diluted in quantities of 50 doses or more, it may be stored for six months without significant loss of potency, if it is kept refrigerated, sterile and unexposed to sunlight.

The emphasis among tuberculosis workers today

* Tuberculin skin testing in children. AM. ACADEMY OF PEDIATRICS NEWSLETTER, **17**:1, (Jan. 1) 1966.

is upon prevention. The prompt recognition of conversion from a negative to a positive tuberculin is of great importance if preventive measures are to be effective. Preventive action in babies and children is directed at stopping the spread of a primary tuberculosis to miliary tuberculosis or tuberculous meningitis. Among older children and adolescents, the purpose of preventive therapy is to guard the patient from reinfection tuberculosis.

The Committee on Therapy of the American Thoracic Society recommends preventive treatment, preferably with isoniazid, in the following groups of patients: †

A. Tuberculin-positive children under the age of three.

B. Recently-infected adolescents whose tuberculin reactions have become positive within the previous one or two years.

C. Recent converters from negative to positive tuberculin reactions in other age groups, particularly if there is evidence of exposure to an infectious case of tuberculosis, or if the Mantoux test shows a large area of induration.

In addition to the converter groups, treatment is urged for apparently "healed" cases of reinfection tuberculosis in which there is any question of reactivation or of inadequate therapy. In patients with conditions that predispose them to tuberculous disease, preventive treatment is also recommended. Examples of these are pregnant women with inactive tuberculosis, and positive reactors who are receiving corticosteroid therapy.

The cooperation of the practicing physician is needed if tuberculosis is to be controlled or eradicated. If the Committee's recommendations concerning tuberculin testing of children and the preventive treatment of converters were carried out, the morbidity and mortality of this infectious disease could be greatly reduced.

THE DIFFICULTY IN ERADICATING SALMONELLAE

The persistence of salmonellae in the feces for many weeks after the patient's recovery from acute food poisoning caused by that organism has presented a perplexing problem to the physician. Despite the administration of various antibacterial agents, positive cultures continue to be reported by the laboratory.

A recent comparative study of two groups of British children,* one having received antibiotic therapy and the other only conventional treatment for gastroenteritis, suggests that the children who received antibacterial agents excreted the organism for a longer period of time than did the untreated children. The untreated group consisted of 64 children between five and 10 years of age who had been infected in 1954 during an outbreak of acute gastroenteritis caused by Salmonella typhimurium in South Wales. At the time, the outbreak was attributed to contamination of unpasteurized milk. Only a very small number of these children—"a handful"—were given an antibiotic. Stool cultures were taken twice weekly from all of the children until they became free of infection. In that group of 64 untreated children, fecal cultures for salmonella were positive in 35 after four weeks; in 20 after five weeks; in 8 after six weeks; in 2 after eight weeks; and in 1 after 12 weeks. Positive cultures in that last child continued until the seventeenth week.

The second group consisted of 67 children involved in an outbreak of food poisoning at a school in Suffolk during September, 1964. It was ascribed to a pork pie served at school lunch. Sixty-seven children ate the pie, and all developed acute gastroenteritis. These children, all between five and 11 years of age, were cared for by their own practitioners. Fecal cultures were taken at weekly intervals until three consecutive negative cultures had been reported.

Fourteen general practitioners cared for the ill children, and a total of 103 courses of treatment containing antibacterial drugs were administered. A "course of treatment" was at least five days in duration. Twenty-nine of the youngsters underwent one course of treatment; 28 had two courses; and 6 had three courses. Some of the therapies included more than one drug—usually an antibiotic and a sulfonamide. *In vitro* sensitivity tests were done before treatment in 63 of the 67 cases. Therapy consisted of neomycin in 39 of the group; streptomycin in 21; ampicillin in 14; tetracycline in 8; and chloramphenicol in 4 children. In 48 of the group, sulfonamide treatment was also given, usually in combination with an antibiotic.

In the Suffolk outbreak, 623 fecal cultures from 67 children were examined. Four weeks after the onset of the illness, 60 had positive cultures for salmonella. Fifty were positive after five weeks; 39 after six weeks; 25 after eight weeks; 9 after 12 weeks; and none after 18 weeks.

The author points out that the two outbreaks were sufficiently similar to warrant comparison. The infecting organism in each instance was Salmonella typhimurium, and both outbreaks occurred in non-resident schoolchildren between five and 11 years of age. In each case the number of infected children was known, and fecal cultures were taken at weekly intervals, or more frequently, until three successive negative cultures had been reported. The groups were similar in size. Except for time and place, the one difference was that in the Suffolk outbreak 94 per cent of the

† Committee on Therapy, American Thoracic Society: Preventive treatment in tuberculosis. AM. REV. RESP. DIS., **91**:2, (Feb.) 1965.

* Dixon, J. M. S.: Effect of antibiotic treatment on duration of excretion of Salmonella typhimurium by children. BRITISH M.J., 2:1343-1345, (Dec. 4) 1965.

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children were treated, whereas in the Wales outbreak only a few of the children were given antibiotic therapy. The strains of the infecting organism in the two outbreaks probably were not the same, but that factor was not thought to have major significance. In previous investigations in which different strains had been involved, there appears to have been no difference in the durations of positive cultures. Thus the only obvious difference between the outbreaks was that antibacterial therapy was given to the Suffolk children.

Others have reported similar disappointments in eliminating salmonellae from the intestine after acute gastroenteritis. Failure of treatment has not been ascribed to the development of resistance to the antibiotic by the organism. Rather, it is supposed that antibiotic therapy disturbs the large-bowel flora that otherwise might serve as the clearance mechanism.

The author concludes that antibiotic therapy prolongs the period of fecal excretion of Salmonella typhimurium. Except in infants, it is unusual for the organism to be excreted in the feces for more than two or three months. It may be unwise to give potent and possibly toxic drugs that may interfere with the antagonistic action of bacteria that are normally present in the colon.

SELF-POISONING

Neil Kessel, an Edinburgh psychiatrist, urges that the term *attempted suicide* be abandoned because it is not a diagnosis.* Rather, he says, it is an interpretation of the motive lying behind an act of self-poisoning. Moreover, he declares, that interpretation usually is wrong.

In the past, he points out, the few people who ingested poisons voluntarily were usually elderly people or psychotics, and they almost invariably died. Poisons were recognized as lethal substances, and it was generally known that if one ingested any of them, he would die. Thus one did not poison himself unless he wanted to die.

Today, self-poisoning is a common and often a serious problem. Each year, Kessel says, one in every thousand Edinburgh adults is admitted to a hospital after such an act. The tremendous increase in poisoning in that city of 476,000 population, he attributes to the phenomenal growth in pharmaceutical products. In previous centuries, poisons and drugs were distinct and dissimilar. Self-poisoning has grown in consequence of the rapid increase in the number of dangerous drugs used therapeutically, and the great frequency with which physicians prescribe them. These factors, Kessel contends, have made poisons easily available—as near as one's own medicine cabinet—and many of the people who take them have no intention or expectation of dying.

He did his study of self-poisoning at the Royal Infirmary of Edinburgh, which has a special ward for patients who require combined medical and psychiatric care. It serves as a center for the treatment of poisoning for the entire city and the surrounding area. His survey of one year's admissions, starting in June, 1962, included all the survivors of deliberate self-poisoning acts. During that year, 151 men and 314 women were admitted. Though the patients totaled 465, there were 522 admissions, for some of them became repeaters. To be included in the study group, the patients had to have taken the poison deliberately; they had to have known that the quantity was excessive; and they had to have been aware that the consequences might be harmful.

Admittedly, it is difficult to assess the patient's preconception of the dangerousness of his self-poisoning, but an "index of endangering life" was determined for each case. The quantity of poison ingested is an important factor in determining the degree of risk, but the staff felt that patients had completely unreliable concepts of the noxious potentials of the materials. An equally important factor in determining the outcome of their acts was their disclosure or concealment of what they had done. To take poison in the knowledge that the consequent emergency is unlikely to attract attention entails a much greater risk than to take a handful of barbiturates and dramatically announce the fact to one's spouse or family. On these criteria, the patients were classified according to "predictable outcome of the act"—(1) death, (2) death probable, (3) death unlikely, or (4) certain to survive.

In the group of 170 males and 352 females admitted during the year, the predictable outcomes of self-poisonings were "death" in 19 per cent of the men and an identical percentage of the women, and "death probable" in 11 per cent of both men and women patients. The predictable outcome thus had been death in approximately one-fifth of the patients, and some risk of death had been present for some 35 per cent. Almost two-thirds of the group had not jeopardized their lives, but Kessel emphasizes that one should not conclude, on that account, that their cases are inconsequential and not serious.

The highest rates of self-poisoning occurred in overcrowded tenements, in Edinburgh's slums. The highest rate of all was in a ward where the majority of the small hotels and lodging-houses are located. In fact the study demonstrated a correlation between self-poisoning and poor and overcrowded living conditions.

Among males, the self-poisoning rate was quite

* Kessel, N.: Self-poisoning. BRITISH M.J., 2:1265-1270, (Nov. 27) and 1336-1340, (Dec. 4) 1965.

constant at between 80 and 100 per 100,000 per year. For teenaged boys, the rate was only half that for adults, and for men over 65 years of age the rate fell to 25 or fewer. Among women the rate for those between 20 and 24 was 280 per 100,000, and for each succeeding year there was a steady decline in the rate. Over age 45, there was no difference between men and women. In one year, more than one in every 500 girls between 15 and 19 years of age poisoned themselves. The high incidence of self-poisoning in girls may perhaps be the counterpart of delinquency in young men, with the young women asserting their aggressions against themselves and the young men asserting theirs against society. Kessel, however, ascribes the high rate among young women in the 19-24 age group to their emotional isolation. Lacking someone with whom to share feelings and dissatisfactions, they are overcome by unhappiness.

Of patients in the 20-64 age range who had married, 30 per cent of the men and 26 per cent of the women were either separated or divorced. The break had occurred within a month of the self-poisoning for a sixth of these people, and was thought to have been a provocative factor. Hostility was frequently present in the husband-wife relationships of the patients who were still married, and in most cases both the patient and the spouse acknowledged that their marriage relationship was bad. In fact the dominant theme in the story of almost every patient was a bad relationship with some key person—spouse, relative or friend—and more than any other factor, it had provided the basis for the act of self-poisoning.

When the backgrounds of these patients were elicited, it was found that by the age of 15 half of them had been deprived of one parent by separation or divorce, and 10 per cent had been completely separated from both parents. Thus a common denominator for most of the patients was a disorganized environment—a broken parental home, a disorganized life pattern, a disorganized marriage and/or residence in a disorganized area.

Superimposed upon the sociologic and demographic aspects of self-poisoning, detailed histories revealed a problem of alcoholism in half of the men and a sixth of the women. Unemployment, financial difficulties, housing crises, conflicts with relatives and troubles at work compounded the predicaments in which these people had found themselves. For young girls, conflict with a boy friend or a broken love affair was a common cause of self-poisoning.

Barbiturates were involved in over one-half of the cases. They had been prescribed by a physician either for the patient or for another member of the family in almost every instance. About one-fourth of the patients admitted to the hospital had ingested one of the newer drugs prescribed for some abnormality of the mental state—stimulants, sedatives, tranquilizers or anti-depressants. Only one patient in a hundred had taken a substance which is not supposed to be ingested at all. Nine per cent had employed coal-gas as a poison.

The staff of the Royal Infirmary had difficulty in the accurate psychiatric labeling of this group of patients. To decide whether a patient's unhappiness had resulted from a depressive illness or from intolerable living conditions was almost impossible in many cases. The line that separates normality from personality disorder is often very fine. Only four or five per cent of the patients had organic illnesses or were schizophrenic. Depressive illness was the commonest condition found—in 43 per cent of the women and in 26 per cent of the men—but it was usually mild and was rarely accompanied by psychotic phenomena. Personality disorder was found in 32 per cent of the men, but in only 16 per cent of the women. In 26 per cent of the men and 20 per cent of the women, no evidence of psychiatric illness could be demonstrated, and though others have asserted that anyone who poisons himself must be psychiatrically ill, Kessel contends that "distress drives people to self-poisoning acts, and distress is not the exclusive province of the mentally ill." His finding that few patients were psychiatrically ill calls for a close scrutiny of patients' purposes, and emphasizes the need for understanding their social settings and the personal relationships within them. These patients are desperate—trapped by intolerable situations for which they can find no answer.

The precipitating factor frequently had been a quarrel. In two-thirds of the cases, the act was impulsive, and impulsiveness was common in patients of all age groups except women over 55 years of age, in whom depressive illness was more frequent. In just 16 per cent of the impulsive poison-takers was it judged that death had been the predictable outcome, as compared with 27 per cent of those whose acts had been premeditated. The author emphasizes that people who poison themselves impulsively have an opportunity to seek help immediately. Most of those who had premeditated their acts had warned someone in advance, but unfortunately their threats usually had not been taken seriously. Patients frequently acknowledged that their warnings had really been cries for help. Moreover, even though their self-poisonings were stupid and senseless, and even though negligible risks were involved, they constituted drama which often attracted the desired attention.

Sixty per cent of the patients who recovered were insistent that they had intended to die, but the author says that little credence can be given to such statements. There was little difference in the degrees of threat to life between the acts of those who said they had wanted to die and those who said they had had no such intent. Very few said

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after recovery that they still wished to end their lives, and those patients were the severely depressed.

He declares that unsuccessful self-poisoning frequently has a beneficial outcome, but that it is the disclosure of the underlying problem which really is responsible for the good result. Poison-taking is dangerous; indeed it kills some people, either by accident or by design. Resuscitation is difficult, expensive and time-consuming. Finally, there are less painful ways of resolving emotional needs within the family setting.

Much responsiblity devolves upon the general practitioner in his role as family physician, since frequently he can alert relatives to the patient's needs. As general preventive measures, it is recommended that only pharmacists should be permitted to sell salicylates, and that the number which any one individual may buy should be limited. Physicians should exercise great care in prescribing dangerous drugs, making sure of the indications for their use and limiting the amounts that the patient may purchase. If there were proper facilities for the care of alcoholics, and if alcoholism were really considered an illness, fewer people would resort to self-poisoning.

Although prevention is the best therapy, Kessel emphasizes the need for psychiatric assessment and treatment along with resuscitation, in the same clinical setting. It is then that proper psychiatric care can do the most good, for the principal figures involved are then most malleable and receptive.

He emphasizes repeatedly that the majority of patients treated for self-poisoning at the Royal Infirmary performed their acts in the belief that they were perfectly safe. What they attempted was not suicide. The purpose of their acts was an alteration of their life situations.

He lays great stress upon the patient's need for a careful psychiatric examination and treatment, regardless of whether he has taken a dozen aspirin or 50 amytal tablets, and he says that the need is by no means proportional to the amount of physical damage that the patient has suffered. He concludes that we need to gain an understanding of all aspects of self-poisoning, if we are to have any appreciation of the total problem or of the individual patient.

Although the problem of self-poisoning in Iowa is not comparable to the one in Edinburgh, it is just as real. Every year well over 300 Iowans succeed in taking their own lives, and it is estimated that fully five or ten times that number make unsuccessful attempts. Every hospital is faced with the emergency treatment of these patients, and there is scarcely a physician, regardless of his specialty, who is not called upon to help care for these people. Greater caution in prescribing potent and potentially fatal drugs would reduce the hazard somewhat, and more frequent referrals of depressed patients for psychiatric care, and of discordant husbands and wives to marriage counselors could have a very favorable influence on this serious problem.

THE CENTRAL TUMOR REGISTRY AT IOWA CITY

Elsewhere in this issue of the JOURNAL is an article by Dr. Joseph Buckwalter about cancer programs in Iowa and the newly established Central Tumor Registry. Setting up the Central Tumor Registry represents an important step forward in the care of cancer patients in Iowa.

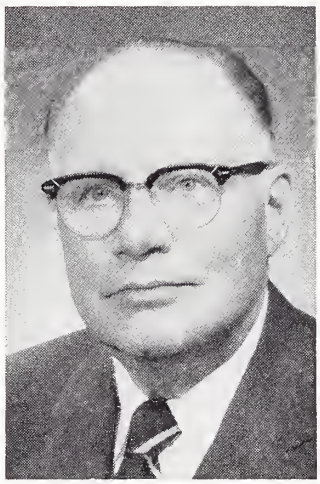
Over the years some local tumor clinics and registries have continued to function, some have stopped, and some have been started. One of their major shortcomings has been their failure to supply usable data, principally because locally collected figures were thought to represent insignificant numbers of cases and because analyses would have required prohibitive amounts of time and effort.

Henceforth the Central Tumor Registry will provide a solution for these problems. Information required by the Central Registry is essentially the same as that which each local registry secretary has been collecting for her own files, and all of the work of coding and processing the information will be done by the Central Registry staff and the U. of I. data-processing department. Each month, the local registry will receive a list of its cases that are due for follow up, and each year it will receive an annual report showing figures both for Iowa as a whole and for its own particular program.

These benefits to the local registry are important and are the most tangible, but benefits will also accrue to the individual physician. Simply by reviewing the annual report, he will gain information about the local and statewide cancer pictures that previously has been unavailable to him. Moreover, the data in the Central Registry and electronic help in analyzing them will be available to him whenever he wants to review the Iowa experience with a particular neoplasm or wishes other information that has not been included in the annual reports. Most importantly, perhaps, the Central Registry will evoke more active participation in local clinic and registry activities, and will promote increased interchange of information and ideas among physicians.

Dr. Buckwalter has outlined a new program which, in our opinion, deserves the support of the physicians of Iowa.

President's Page



Attendance at the conference on the implementation of the Medicare Law, in Des Moines, February 6, 1966, was very gratifying. It indicated the alertness of Iowa physicians and their desire to be well informed.

The executive staff did an excellent job of assembling the talent and arranging the program.

Since the meeting, Blue Shield has been named the intermediary agent for Part B in Iowa. We all should feel fortunate about that choice.

I sincerely hope every member will make an effort to read the summary of the meeting which appears in this issue of the JOURNAL. It is of utmost importance for each physician of Iowa to keep abreast of the developments and of the regulations that are adopted, so that he will be able to answer all questions asked of him both by his patients and by the lay public.

At any time when there are questions that you can't answer, feel free to contact your district councilor or your state office.

Many of the final arrangements will be known by the time of the state meeting, which will be held April 24-27. All pertinent information will be reported at that time. I urge everyone that possibly can to attend.

A proper understanding of the present situation on the part of each individual physician will be of great help in preventing further extensions of governmental interference. Let us all keep abreast and have the answers!

Frank Ober

President

THE JOURNAL *Book Shelf*

BOOK REVIEWS

HALLUX VALGUS, ALLIED DEFORMITIES OF THE FOREFOOT AND METATARSALGIA, by *H. Kelikian,* M.D. (Philadelphia, W. B. Saunders Company, 1965. $19.50).

This book presents 500 pages of discussion on hallux valgus and certain painful conditions in the forefoot. Unfortunately, disputes over credit for priority of discovery or development are overemphasized. Such arguments may be valuable to someone with a special interest in the foot, but one gets the impression that the author has attempted to rewrite orthopedic history to fit his own philosophy. For example, he goes to great lengths to revive interest in the Silver operation and to belittle the McBride method of treating bunions. In discussing plantar neuroma, or so-called Morton's toe, it seems to me that he goes out of his way to avoid recognizing the work of Betts and McElvenny.

He further upsets some of our cherished concepts of the widely practiced Keller operation by ascribing the origin of that mode of treatment to others. One is reminded of Osler's dictum: "In science, the credit goes to the man who convinces the world, not to the man to whom the idea first occurred."

This book does constitute a wonderful source of material on orthopedic conditions of the forefoot. Although Dr. Kelikian's recommendations are somewhat outside the mainstream of orthopedic thought in many instances, they are provocative and he is able to show good end results from the technics he uses.

There is very little that is new in this volume. Though there are some modifications to the classical foot operations, they are minor. Dr. Kelikian recommends surgical syndactylia of deformed toes to correct many conditions such as hammer toe, soft corn and certain cases of under- and overlapping toes. He recommends resection of the metatarsal head for intractible callouses with surgical syndactylia of adjacent toes.

Many case histories are presented throughout the book to demonstrate his approach to the problems of forefoot surgery. These are well illustrated with photographs, and the orthopedic surgeon is thus enabled to compare his end results with Dr. Kelikian's.

Although no one but an orthopedic surgeon would be interested in this book, and although I tend to disagree with some of the ideas expressed in it, it is true that it contains material to stimulate and educate the reader who is interested in foot surgery.—*John H. Kelley,* M.D.

CURRENT CONCEPTS IN MEDICAL PRACTICE, ed. by *John E. Mullins,* M.D. (St. Louis, The C. V. Mosby Company, 1965. $10.75).

This little book makes rapid reading by summarizing nine subjects in as many chapters. Each subject is presented by one of the staff of the Washington University School of Medicine or allied private hospitals. The purpose of the authors is to summarize recent developments without exhausting either the subject or the reader. Only common problems encountered by non-surgeons are considered. The authors quote information published during 1963 and 1964, and wisely avoid cluttering their discussion with all of the investigators' names. At the ends of the chapters are the numbered references.

A typical chapter, "Hematologic Disease," includes several pages each on viruses and leukemia, functions of nucleic acids related to cellular protein synthesis, and fibrinolytic disorders.

The book is thoroughly enjoyable, and is a step in the direction of streamlining the literary load.—*Thomas D. Ghrist,* M.D.

BOOKS RECEIVED

NURSING EDUCATION IN COMMUNITY JUNIOR COLLEGES, by *Bernice E. Anderson,* R.N., Ed.D. (Philadelphia, J. B. Lippincott Company, 1966).

FIFTH NATIONAL CANCER CONFERENCE PROCEEDINGS, sponsored by American Cancer Society, Inc. and National Cancer Institute (Philadelphia, J. B. Lippincott Company, 1965).

CURRENT PEDIATRIC THERAPY 1966-1967, by *Sydney S. Gellis,* M.D., and *Benjamin M. Kagan,* M.D. (Philadelphia, W. B. Saunders Company, 1966, $17.50).

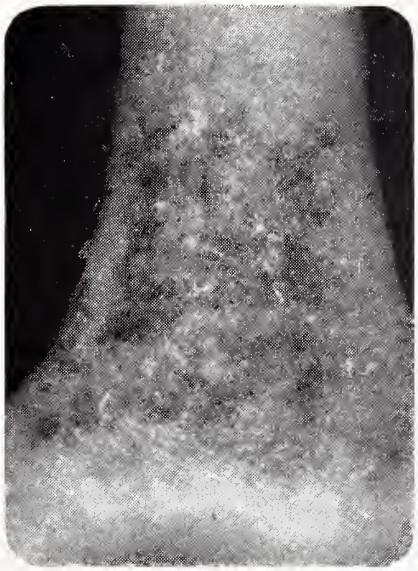
THE HEART: Its Function in Health and Disease, by *Arthur Selzer,* M.D. (Berkeley, University of California Press, 1966, $5.95).

THE CELL: Its Organelles and Inclusions, by *Don W. Fawcett,* M.D. (Philadelphia, W. B. Saunders Company, 1966, $11.00).

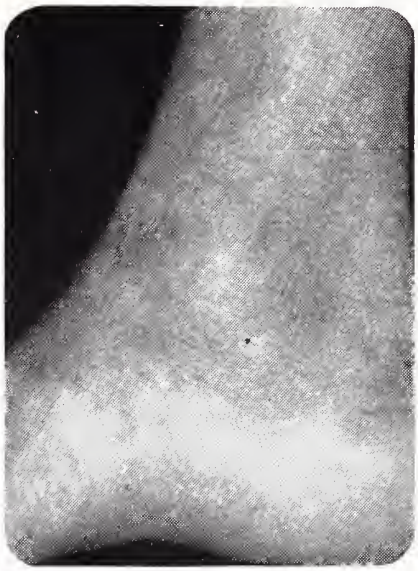
GONADOTROPINS: PHYSIOCHEMICAL AND IMMUNOLOGICAL PROPERTIES, Ciba Foundation Study Group No. 22, edited by *G. E. W. Wolstenholme,* O.B.E., F.R.C.P., F.I.Biol., and *Julie Knight,* M.A. (Boston, Little, Brown and Company, 1965, $3.50).

MAN AND AFRICA, edited by *Gordon Wolstenholme* and *Maeve O'Connor* (Boston, Little, Brown and Company, 1965, $7.50).

eczema: scourge of childhood



R. R., Age 11—Before treatment—atopic eczema of long standing



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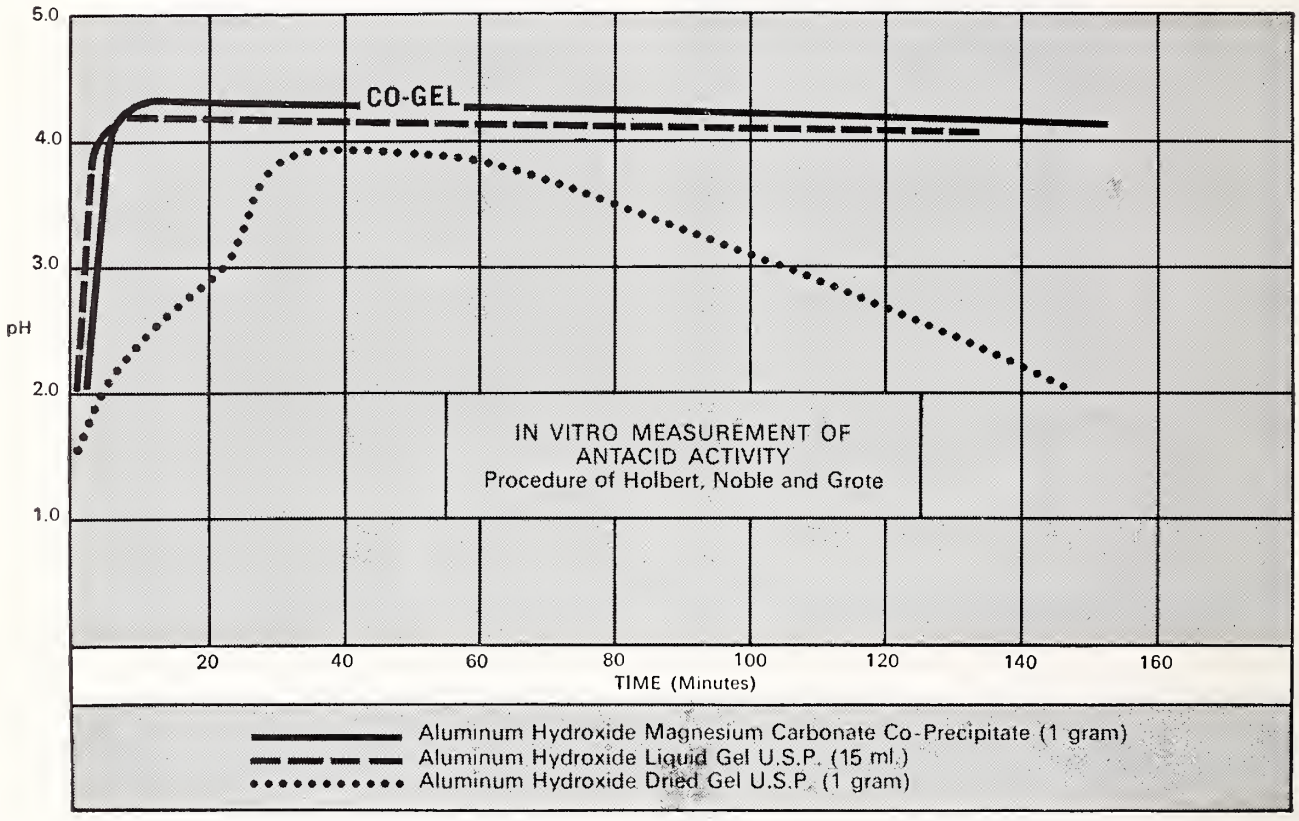

Holbert, J. M., Noble, N., and Grote, I. W.—Jnl. Amer. Pharm. Assoc. (Sci. Ed.) 37,292 (1948).

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A Summary of

The IMS Briefing on Medicare

February 6, 1966

In opening the meeting, Dr. F. G. Ober, president of the Iowa Medical Society, asked his colleagues to acknowledge that Medicare is now the law of the land, and to work together to make it as palatable as possible. Yet, he declared, Medicare does not provide the federal government with a charter for further intervention in the doctor-patient relationship, and organized medicine certainly will not encourage it to think so. He said that the IMS and other branches of organized medicine are keeping a careful watch upon the regulations by which Medicare is implemented, so as to make sure that it is made to include no more than Congress authorized, and that the best interests of both physicians and the public are protected.

He pointed out one particular in which the IMS has already been influential. Because of HF 21 (1957 General Assembly of Iowa), for which the IMS was largely responsible, and under which hospitals were forbidden to practice medicine in this state, Congress provided that compensation to hospital-based specialists might be made under Part B, rather than under Part A of the law. Also, together with other state medical societies and the AMA, the IMS appealed to Congress (1) for any program involving payment for physicians' services by the government to be based on usual, customary and reasonable fees, and (2) for a physician, if he wishes, to refuse payment from the government. Part B of the Medicare Law contains both of these provisions.

Since enactment of the Law, the AMA has secured the establishment of a principal advisory committee to HEW and numerous technical committees that will help write Medicare regulations. Dr. Donovan F. Ward, of Dubuque, is a member of the major one of these, and Dr. Elmer M. Smith, of Des Moines, is a member of the Technical Committee on Provider Participation. Also since enactment of the Law, the IMS has taken firm stands regarding the share it feels it must have in the administration of the program, and regarding the maintenance of the usual-and-customary-fee concept.

Dr. Ober concluded by making a plea for unity in resisting extensions of Medicare, and he pointed out the imminent dangers by quoting a statement made by Senator Russell Long (D., La.), the new chairman of the Senate Finance Committee, during an interview reported in the December 19 issue of Forbes Magazine: "In the next two years, we will continue to increase the payments; continue to expand the program. It's inevitable that Medicare will be extended to cover practically everybody—the young and old. The next group will be the disabled."

ARTHUR LAMPERT, M.D.

Dr. Arthur Lampert, a South Dakota private practitioner who had been at the Social Security Administration headquarters in Baltimore for two months serving as one of the AMA's advisers on the implementation of the medical-care section of the Medicare program, had stopped in Des Moines on his way home, to participate in the IMS briefing session. He said that he had been one of two AMA representatives. The other one, Dr. Roberta Fenlon, a San Francisco internist, had been there for 4½ months.

Dr. Lampert summarized his and Dr. Fenlon's modest successes in Baltimore by saying that they had been able, perhaps, to change the directions of proposed regulations one degree here and 10 degrees there, so that doctors might find Medicare a bit easier to live with.

PL 89-97, he reminded his audience, has four titles, and physicians are concerned about Parts 1 and 2 of Title 1. Part 1 of Title 1 has subparts, notably "A." and "B." "A" provides basic hospital coverage and related hospital services, including certain outpatient diagnostic services, and care in extended-care facilities and through home health agencies. "B" establishes the medical-insurance program, pays physicians or partially reimburses patients for physicians' fees, provides certain types of home health care for which there is no prerequisite hospitalization, and provides other specific items such as ambulance service, prostheses, etc. These subdivisions A and B, he pointed out, have become Title 18 of the Social Security Act,

which was originally adopted in 1935. He emphasized that Parts A and B differ in that Part A is compulsory for all persons 65 years of age or older, and is financed by the wage-tax mechanism; Part B is volitional in that eligible people must sign up for it and must pay a premium of $3 per month for it. Because of the different ways in which services are to be financed in Parts A and B, some difficulties have arisen about the compensation of hospital-based physicians. Part 2 of Title 1 of PL 89-97, which has become Title 19 of the Social Security Act, is intended to equalize grants to states for medical assistance to the beneficiaries of all categorical relief programs, when it takes effect next year.

Dr. Lampert then commented on the specific sets of regulations on which he and Dr. Fenlon had offered suggestions to the SSA officials. First were those relating to the certification and recertification of patients for hospitalization. These procedures, he said, could readily be complicated, and the doctors had to resist efforts to complicate them. Though the regulations are not yet final, he predicted that initial certification will require merely a rubber-stamped or preprinted form needing no more than the doctor's signature. Recertification will be necessary on about the fourteenth hospital day, he expects, and then on or about the twenty-first day and each thirtieth day thereafter. The doctor, at each of those times, will have to state (1) why the patient must remain hospitalized; (2) how much longer the patient must stay; and (3) where the patient is expected to go when he leaves the hospital.

Second of the sets of regulations that Drs. Lampert and Fenlon had a hand in planning were those having to do with utilization committees. These committees, Dr. Lampert said, usually will be chosen by the medical staffs of hospitals from among their own members. Where the medical staffs are very small they can be chosen by, and from the membership of, the local medical society. The law contains a third alternative—that laymen may be appointed to utilization committees—but Dr. Lampert assumed that physicians would not want to choose it.

Utilization committees are to conduct two types of reviews. In retrospective analyses, they will study admissions patterns, services including drugs and biologicals, and lengths of stay, their purpose being mainly educational. Their second type of review will be ongoing analyses of the long-term patients, and each hospital staff will decide what length of time constitutes a long term. The fiscal intermediary, rather than the certifying agency, he said, will probably represent the government in checking to make sure that each hospital's utilization committee is carrying out its assigned functions. He intimated that this regulation, if it isn't changed, will represent a victory for organized medicine.

Last, Dr. Lampert spoke briefly about physician compensation or patient reimbursement, saying that he expects the SSA to issue guidelines about procedures to be followed in determining "reasonable" fees, similar to those which it has promulgated regarding the technical-professional split. Physicians, he declared, need not fear that the low rate which the fiscal-intermediary insurance company may have paid physicians for services to some of its policyholders will be made the basis for determining their fees under Medicare. On the contrary, he expressed a belief that "reasonable" charges will be "usual-and-customary as we know them."

In conclusion, he reminded his audience that Medicare regulations are final only regarding three topics: utilization committees, conditions for participation by hospitals, and the technical-professional split.

BERNARD J. HARRISON, J.D.

After more than two decades of opposing Medicare-type legislation, the American Medical Association now faces a different and immense task, that of providing leadership to 200,000 physicians in the PL 89-97 era. And still in evidence among many of these physicians, is the emotion built up during that long struggle. These introductory remarks set the stage for an examination by Mr. Bernard J. Harrison of the posture of the AMA at this point in the Medicare countdown. Mr. Harrison, of Chicago, Illinois, is director of the AMA's Legislative Department.

Starting with the original Murray-Wagner-Dingle legislative proposal introduced back in 1943, Harrison traced the events which led to the eventual enactment of PL 89-97 in 1965. The emotional impact of President Kennedy's assassination, the ascension and subsequent election of President Johnson, and the entry of many Medicare supporters into the legislative halls, according to Mr. Harrison, were primary factors from the recent past responsible for the enactment of PL 89-97.

He recited the policy adopted by the AMA House of Delegates at its special meeting last October. That session, he said, was held to consider just what the position of the physician should be, in light of this legislation. He read part of the policy which evolved: "The American Medical Association shall continue to meet with representatives of agencies and departments of the federal government, to participate in such advisory committees as are created, and to contribute whatever advice and suggestions are deemed advisable and necessary in the formulation and revision of regulations which will help achieve medicine's objectives on behalf of the public and the profession."

During the balance of his remarks, he outlined the AMA's involvement in the development of

rules and regulations for PL 89-97. He indicated that the AMA Advisory Committee had been established to provide liaison with the Social Security Administration of HEW. He said further that it has served as a mechanism for acquiring information which in turn could be distributed to the membership, and finally, he asserted, its members are doing everything possible to eliminate or reduce the detrimental effects of the law. The Committee, he said, consists of seven physicians and three additional consultants.

The six Technical Committees charged with developing recommendations for regulations in specific areas also include AMA representatives. He listed these Technical Committees: (1) Reimbursement; (2) Physician Participation; (3) Provider Participation; (4) Administrative Agents; (5) Specialists Services; and (6) Psychiatric Services. He described briefly the efforts of the physicians serving on these Committees, citing their efforts to make the regulations as unabrasive as possible.

The AMA's representation by two physicians on the Special Ad Hoc Committee on Title 19 was mentioned by Mr. Harrison. He said their efforts can be of significant value as the rules for this broad area are formulated.

Mr. Harrison described the AMA's recent additional efforts to get late information on PL 89-97 to the membership via the AMA NEWS, and also by means of a weekly "gray sheet" which is sent to AMA delegates and state society officers. He said the AMA recognizes that it has a clear and distinct obligation to inform its members about Medicare developments, and he said he believes this obligation is being met.

In describing various ones of the meetings the AMA Advisory Committee has had with the Secretary of HEW, Mr. Harrison indicated that medicine's suggestions and recommendations have been heard and, in many instances, followed. He said that Secretary John Gardner, in responding to one AMA recommendation, authorized a 30-day waiting period following the submission of any draft of regulations, in order to provide the AMA and other groups an opportunity to submit reactions prior to their promulgation in final form. It has also become routine, he said, for reports of the Technical Committees to go directly to Secretary Gardner as well as to the statutory Health Insurance Benefits Advisory Council (HIBAC). In this way, the Secretary is able to note the original comments of the Committee in addition to any modifications made by HIBAC.

Mr. Harrison illustrated the important role of the Technical Committees by referring to the subject of utilization review. Technical Committee No. 2 emphasized that utilization review is a professional medical concern, and that intrusion into matters of professional committees by government agencies was without precedent. It insisted that any intrusion would conflict with the language of the Law, which says there shall be no federal interference. The Committee urged maximum use of hospital medical staff authority, and suggested that state agency involvement in case review and actual committee function be prohibited, or limited just to assessment of the adequacy of the plan. This recommendation from Technical Committee No. 2, he said, has been well received and, for the most part, will serve as the basis for the regulations.

The subject of physician reimbursement was also used by Mr. Harrison to indicate the activity of the Technical Committees. The language of the Law implying that a carrier may pay the physician only at levels comparable with those of the income-ceiling plans was carefully assessed. It was made abundantly clear, he said, that there is no relationship between minimum income benefit plans and this Law. The Technical Committee emphasized that this Law was not written for the needy, and that physicians should not be expected to subsidize its coverages.

In summation, Mr. Harrison declared that if we had our way, we would repeal the Law. However in lieu of repeal, he said, a great number of things have been and are being done by the AMA which, to his way of thinking, are moving it one degree here and 10 degrees there in a direction which hopefully will make it less abrasive and less detrimental to the public and to the physicians who have to practice under it.

He said the constitutionality of PL 89-97 is being and will continue to be studied, and if at any time it appears that a challenge is appropriate, it will be challenged.

CHARLES P. HAWKINS, M.D.

The first of three speakers to discuss the availability of coverage for those beyond 65 who wish a program either in lieu of or in addition to Medicare was Dr. C. P. Hawkins, of Clarion, president of Iowa Medical Service (Blue Shield). Dr. Hawkins indicated at the outset that physicians will do their beyond-65 patients a definite service by encouraging them to sign up for Part B of Medicare. He said the failure of today's senior citizens to participate in Medicare's Part B would parallel, in folly, the failure of some World War II servicemen to obtain the National Service Life Insurance offered by the government.

As of that date (February 6), Dr. Hawkins explained that Blue Shield was still in the final stages of determining the complementary coverage it will offer to Medicare participants. He said that selection of the Part B carrier in Iowa would have some bearing on the complementary program Blue Shield will offer.

Dr. Hawkins described the anticipated program as one of providing "gap-filler" coverage. In reviewing the preliminary action taken thus far, he

reported that the Blue Shield Directors had voted (1) to offer some supplementary coverage; (2) as the basis, to use an existing contract already approved by the Iowa Medical Society; (3) possibly to offer a Blue Shield-only policy for those individuals who choose not to sign up for Part B; and (4) to provide a "carve out" of Medicare benefits from Blue Shield policies. This latter procedure, he said, will reduce the likelihood of duplications of benefits and thus prevent an individual from profiting from an illness.

Dr. Hawkins commented on the loyalty which Blue Shield owes to its almost 800,000 subscribers in Iowa and called attention to the $17 million which these subscribers have prepaid in 1965 as protection against illness. He likewise emphasized the loyalty which Blue Shield has to its 2,200 participating physicians, and he added that the Blue Shield Board also keeps in mind the interests of non-participating physicians. Obviously, he said, the supplemental coverage developed by Blue Shield must be acceptable to the subscribers and to the physicians who make The Doctors' Plan work.

In concluding his remarks, Dr. Hawkins pointed out that Blue Shield proposals must be cleared with the State Insurance Commissioner before they can be offered to the people of Iowa. Dr. Hawkins was optimistic about this approval. The Insurance Commissioner, Dr. Hawkins said, feels Iowa has a good Blue Shield program, and therefore is likely to look with favor on a sound proposal for complementary coverage.

Dr. Hawkins said a special meeting of the Blue Shield Board of Directors would be held soon to finalize the program of complementary coverage to Medicare.

MR. WILLIAM GUY

Mr. William Guy, of Des Moines, president of Hospital Service, Inc., of Iowa, made it clear that Blue Cross will offer coverage to persons over 65. He said his remarks would have to be considered tentative, for what he proposed to say lacked the approval of the State Insurance Commissioner. This, Mr. Guy pointed out, would be a pre-marketing necessity.

He indicated, however, that the Blue Cross Board had established its position with regard to Medicare. He said Blue Cross (1) will offer complementary coverage; (2) will make an active effort to promote and sell the program; (3) will underwrite several levels of benefits in an attempt to meet the flexible demands of the market; (4) will offer realistic coverage, not catch words or phrases designed to sell rather than to cover; and (5) will not offer coverage which duplicates that being provided by Medicare.

Characterizing the anticipated program as a "gap-filler approach," he said it would cover (1) the Part A $40 deductible per spell of illness; (2) the $10 per day deductible from the 61st to the 90th day; (3) an additional 30 days of full hospital coverage; (4) outpatient care for surgery and emergency care within 72 hours of an accident; (5) an additional 60 days of care for mental cases; and (6) coverage on a worldwide basis.

Blue Cross, he said, contemplates making these "gap fillers" available to all residents of Iowa—those currently enrolled and those not enrolled. There will be an open-enrollment period of approximately two months, he added, and the usual health underwriting statement will not be required during that period. He said an active pro-

The speakers at the morning session were (left to right): Mr. Ray C. Niblo, Mr. Bernard J. Harrison, Dr. Frank G. Ober, Mr. William Guy, Dr. Charles P. Hawkins, Dr. Arthur Lampert and Dr. Samuel P. Lienbach (presiding officer).

gram of promotion will be undertaken during the two-month period, and meetings will be held with employers, as well as with the state's senior citizens.

Blue Cross, he declared, is accepting the challenge which government laid down when it said to private industry, in essence, you do this job or we shall do it for you. "We are convinced," he said, "that the better we do the job, the less need there will be for government to do it."

MR. RAYMOND C. NIBLO

Speaking for the Health Insurance Council, a federation of more than 700 private insurance companies, Mr. Ray Niblo, of Des Moines, reemphasized the industry's opposition to Medicare legislation. He said the insurance industry believes the people of the United States would have been better served under a private, voluntary system.

The impact of PL 89-97 on the health insurance business will be of major proportions, Mr. Niblo declared. The Law will require readjustment of both outstanding and new business. It will be a costly and laborious period of retooling for the entire industry. He commented that health insurance coverage of persons 65 and beyond, at the time of passage of Medicare, exceeded one-half billion dollars and involved over six million individuals.

Alteration of practically all outstanding beyond-65 policies will be necessary, Mr. Niblo explained. Outstanding policies on younger people, which are guaranteed renewable beyond 65 or are paid-up at 65, will require reexamination. New business will have to be adjusted to anticipate the benefits of the new government program, he said.

He cited the complex matter of communication with policyholders. It will be important for policyholders to have an accurate knowledge of the relationship between the federal program and the coverage provided by their private company. A satisfactory means of avoiding duplication must be devised. The problem is complicated, he continued, by the fact that Part B is voluntary and some people won't elect it, despite the government subsidy.

Decisions on and reconsiderations of group insurance contracts involving active workers or retirees over 65 will have to be undertaken, Mr. Niblo said. These decisions will involve some collective bargaining and will be done on a case-by-case basis. Some companies may desire to supplement the government program by providing retirees with non-Medicare benefits; others may choose another course.

The guaranteed-renewable aspect of a sizable number of individual policies presents problems, he noted, since they cannot be altered without the consent of the insured. Some persons will want to keep their policies, regardless of Medicare; others will not. Many companies probably will develop what he described as exchange offers.

It is a certainty, he declared, that coverage will be available to complement the government program. This coverage will be available both for group plans and on an individual or family-policy basis. He explained that these complementary offerings will vary widely. Some will take the form of a continuation of present coverage, with Medicare benefits excluded. Some will take the form of new coverage. Benefits excluded from Medicare, such as private-duty nursing, prescribed drugs, and hospital care beyond 90 days, will be offered in varying patterns and degrees. Another complementary approach will involve indemnity payments of a flat amount of money for each day a patient is hospitalized.

It is a fair assumption, Mr. Niblo concluded, that after Medicare has been in effect for a year or two, after the needs left uncovered have been clarified, and when more is known about the cost of insuring those needs, many companies will revise their original ideas and adapt their products to what seems desirable in the light of experience.

CECIL W. SEIBERT, M.D.

Dr. Cecil W. Seibert, of Waterloo, chairman of the IMS Board of Trustees, reviewed the steps that the IMS has already taken, and the further ones that it must take in the implementation of Medicare in this state. He reported that following two meetings with SSA officials in Philadelphia and Baltimore, at the time of the AMA interim meeting last fall, and a series of meetings with Iowa Medical Service (Blue Shield) board members shortly thereafter, the IMS Board of Trustees recommended having the Society support Iowa Blue Shield's application for appointment as fiscal intermediary, and the IMS Executive Council approved that recommendation. (Early in the week following the February 6 Medicare briefing session in Des Moines, Blue Shield was notified of its appointment as fiscal intermediary for Part B of Medicare, in Iowa.)

Dr. Seibert said that during their series of conferences, the IMS trustees and the Blue Shield board members reached an understanding as to the ways in which the IMS would cooperate with Blue Shield. Principally, the IMS is (1) to gather and to furnish information about the fees charged by individual physicians for various medical and surgical procedures; (2) to determine that the fees charged for services to Medicare beneficiaries fall within ranges that can be regarded as customary in the respective localities; (3) to help in adjudicating any disputed fees; and (4) to take a major part in conducting physician-relations and public-relations programs with respect to Part B.

Because it recently completed a fee survey, Dr. Seibert said that the IMS is prepared to furnish current information to Blue Shield about the usual

and customary fees charged by physicians in the various parts of the state. Claims committees have already been set up by most, if not all, of the county medical societies, and he cautioned the local society officers in his audience to be sure that those committees are fully manned and are prepared to act promptly whenever any allegedly unreasonable charges are brought to their attentions. The continued acceptance of the usual-and-customary-fee concept, he declared, will depend upon the full cooperation of individual physicians and on the efficiency of local claims-review committees.

ROBERT B. THROCKMORTON, LL.M.

Mr. Robert Throckmorton was general counsel to the AMA from 1963 to 1965, and since resuming his private practice of law in Des Moines, he has once again became the legal counsel for the Iowa Medical Society. At the Medicare briefing session, it was his task to clarify physicians' legal responsibilities and privileges under the new law.

Public Law 89-97 is entirely voluntary insofar as physicians are concerned. However, this Law purports to make available to over 18 million people health benefits that will be denied them unless physicians cooperate. This fact imposes a heavy responsibility on the medical profession.

Regarding Part A, which will provide hospital and nursing-home services to virtually everyone over 65 years of age, doctors of medicine will be expected to certify the medical necessity of admissions and continuations of care, and to carry out utilization surveys, even though that section of the Law relates only minimally to medical services as such.

Regarding collections for services rendered to the beneficiaries of Part B of Medicare, Mr. Throckmorton said that the physician has two alternatives: (1) He can let the patient assign to him his claim against the government. In that event, the doctor mails the form to the fiscal intermediary for Part B, and can expect to receive a check for 80 per cent of his fee, provided that his fee has been regarded as reasonable. (2) He can give his bill to the patient, and when the patient has paid it in full, he can receipt it and tell him that it is his job to ask reimbursement from the fiscal intermediary.

As for the mechanics of handling claims under Part B, Mr. Throckmorton showed his audience a one-page form that seemed likely to be the one finally agreed upon. The top half is to be filled in by the patient, and the following statement is one of those that he must subscribe to: "The above information is correct. I am requesting payment either to myself or to the party accepting my assignment for the medical insurance benefit, if any, payable for the reasonable charges for the services described. I understand that I am responsible for any charges which are not covered." That is very important, Mr. Throckmorton pointed out, for there is 20 per cent coinsurance in all instances, and there may be a $50 deductible in some.

The patient may indicate that he wishes to assign his claim against the fiscal intermediary, but his doing so means nothing unless the physician indicates his willingness to accept assignment. The doctor can accept assignment by checking the appropriate box and affixing his signature, but if he does not wish to do so, he can check the box opposite "I do not accept assignment," or can refuse to mark the form at all. He isn't required even to sign it, Mr. Throckmorton thinks. If the doctor has itemized the charges on his usual billing form, he has provided the patient sufficient information so that he can complete the top half of the Medicare claim blank, and when the bill has been marked "paid," all he has to do is to clip the two together and mail them to the fiscal intermediary.

Mr. Throckmorton said it is legal in Iowa for the physician to take a patient's promissory note in lieu of money, and mark the bill "Paid," though he pointed out that medical ethics may require such a note to be non-interest-bearing. Normally, in such instances, the patient will make a payment on the note as soon as he receives his check from the fiscal intermediary and will pay the balance eventually, but if he fails to do either or both of these, the doctor can give the note to a collection agency or can sue for the money due him. To mark a bill "Paid" without having received either money or a note, Mr. Throckmorton warned, would probably be illegal.

Regarding the technical-professional split, and the problem it poses for Iowa hospitals and hospital-based physicians, Mr. Throckmorton said that pathologists are most seriously affected. The eight-point HEW memorandum would permit payment under Part B of Medicare only for identifiable services that call for a doctor-patient relationship. For the radiologist who examines every film and for the anesthesiologist and the physiatrist who see each of their patients, there would be no serious problem, but the pathologist could collect under Part B only in instances where he personally performed an identifiable service. In Iowa, a state law (HF 21, 1957 Legislature, declares everything done by technicians in a pathology laboratory to have been done, in effect, by the pathologist, and requires him to do the billing and to receive payment. Thus, provided that federal regulations override state law in this instance, pathologists in our state would have to be paid according to the technical-professional split for work occasioned by no more than 13 per cent of patients (the share of Iowans who are 65 or more years of age), and by the method sanctioned by Iowa law for work occasioned by the remaining 87 per cent of patients.

Mr. Throckmorton expressed the opinion that the IMS, the Iowa Hospital Association and the Iowa societies of hospital-based specialists should jointly request HEW to exempt Iowa from the technical-professional split, at least temporarily. Since the services of hospital-based specialists are currently billed as hospital services in the other 49 states, the technical-professional split is a new departure for them, too, and may be found completely unsatisfactory. If, on the other hand, it turns out to be workable, the 1969 Iowa General Assembly can be asked to change the Iowa law and make it accord with the national pattern.

His comments on utilization committees were very brief. He said he thinks the work of such groups will be generally salutary. The ongoing analyses conducted by utilization committees, he expects will be helpful to doctors who may want to shift responsibility for telling their patients that they have been in the hospital long enough and must be moved elsewhere.

ARTHUR P. LONG, M.D.

Dr. Arthur P. Long, commissioner of health for the State of Iowa, heads the agency that will survey and certify health-care facilities for participation in the Medicare program. He said that the State Department of Health will have functions that have come to be known as the three C's: Certification, Consultation and Coordination. All of these relate to Part A, the hospitalization and extended-care portions of the program.

The certification process, he explained, will include identifying the facilities that perhaps can satisfy the qualifications; receiving applications from them; surveying them to determine their eligibility; and making sure that any significant deficiencies are remedied prior to certification.

Three types or periods of certification are contemplated, at least for hospitals. Those which are already accredited by the Joint Commission on Accreditation of Hospitals and which can show evidence of having utilization-review programs will be certified for two years almost automatically. (Dr. Long mentioned that the JCAH has recently made a utilization-review program one of the prerequisites for all future accreditations or renewals of accreditation.) Certifications will also be made for two-year periods for hospitals that aren't now JCAH-accredited but meet Medicare regulations and have no significant deficiencies. Certifications for periods of 18 months will be made for hospitals which have deficiencies but are found to be in substantial compliance with the regulations, provided that they present positive and acceptable evidence of their intention to remedy their deficiencies. These institutions, he said, almost certainly will be resurveyed within six months to a year. He emphasized that after applying for a determination of eligibility a hospital is not under any obligation to accept the participation agreement offered by HEW.

The consultation function of the State Department of Health, Dr. Long said will involve providing help, especially to the hospitals and other institutions which must upgrade their facilities and/or services. Its consulting and coordinating activities will not include supervision of utilization-review committees, for that will be the business of the fiscal intermediaries and the medical staffs of the individual hospitals. But the Department will have a share in statewide or areawide health-facilities planning, and contemplates the establishment of a coordinating committee on health care, consisting of representatives from the IMS, the Iowa Nursing Home Association, the State Department of Social Welfare, the fiscal intermediaries for Parts A and B, ISOPS, the Non-Profit Nursing Homes, and the Iowa Hospital Association.

Certification of hospitals will be a big job, particularly in Iowa, for the one-third of our hospitals that are JCAH-accredited contain 80 per cent of the total beds, whereas nationwide, two-thirds of the hospitals are accredited and contain 80 per cent of the total beds. Thus, in Iowa, one can expects that twice the national average number of hospitals will need to be surveyed and possibly upgraded if they are to become eligible for Medicare. Extended-care facilities will require a separate and similar survey, improvement and certification program, but one that is less immediate, since they can start participating in Medicare no earlier than January 1, 1967. Surveys of independent laboratories, prior to their certification, will be conducted by the State Hygienic Laboratory. Certifying home health agencies will be still another job for the State Health Department.

Dr. Long reported that conditions of participation for extended-care facilities, home health agencies and independent laboratories haven't yet been announced by HEW. Copies of the application form for hospitals had arrived in Des Moines, at the time of the IMS briefing session, and he said they would be distributed to the hospitals within a few days, even though the presurvey forms had not arrived and could not be mailed with them.

Since only about 90 working days remained before hospital D-day for Medicare, Dr. Long said that he had had to proceed with the staffing of survey teams in anticipation of HEW approval for his Department's plan and budget. He predicted that at least two survey teams would be needed.

ELMER M. SMITH, M.D.

Dr. Elmer M. Smith, medical director for the State Board of Social Welfare, pointed out that Title 19 of the Social Security Act will eventually affect more people than will Medicare. Title 19 is intended, by progressive steps to assure adequate medical care to all of the medically indigent, and immediately to equalize the medical benefits available under all federally-subsidized programs. The

only exceptions to the latter will be that children needn't be provided nursing-home care, and elderly people needn't be hospitalized at government expense for the treatment of mental illness or tuberculosis.

States that start their Title 19 programs before July 1, 1967, must provide some institutional and some non-institutional types of care. States starting programs after that date will be required to provide inpatient and outpatient hospital services, skilled nursing-home services for adult patients, and physicians' services. All states must agree to broaden their programs so that by July, 1975, substantially all medical indigents will be eligible for virtually complete government-supported health care.

Dr. Smith said that the State Board of Social Welfare intends to "buy into" Part B of Medicare for all of its eligible OAA recipients, and to pay deductibles and coinsurance whenever they have occcasion to utilize Part B benefits. The Board does not intend to pay Part A deductibles for hospitalization at the beginning, but may do so later, if it has enough money. MAA recipients are a partial exception to the above; for them, the Board is not allowed to pay premiums, but will pay deductibles and coinsurance under Parts A and B. OAA recipients will have nursing-home deductibles paid for them.

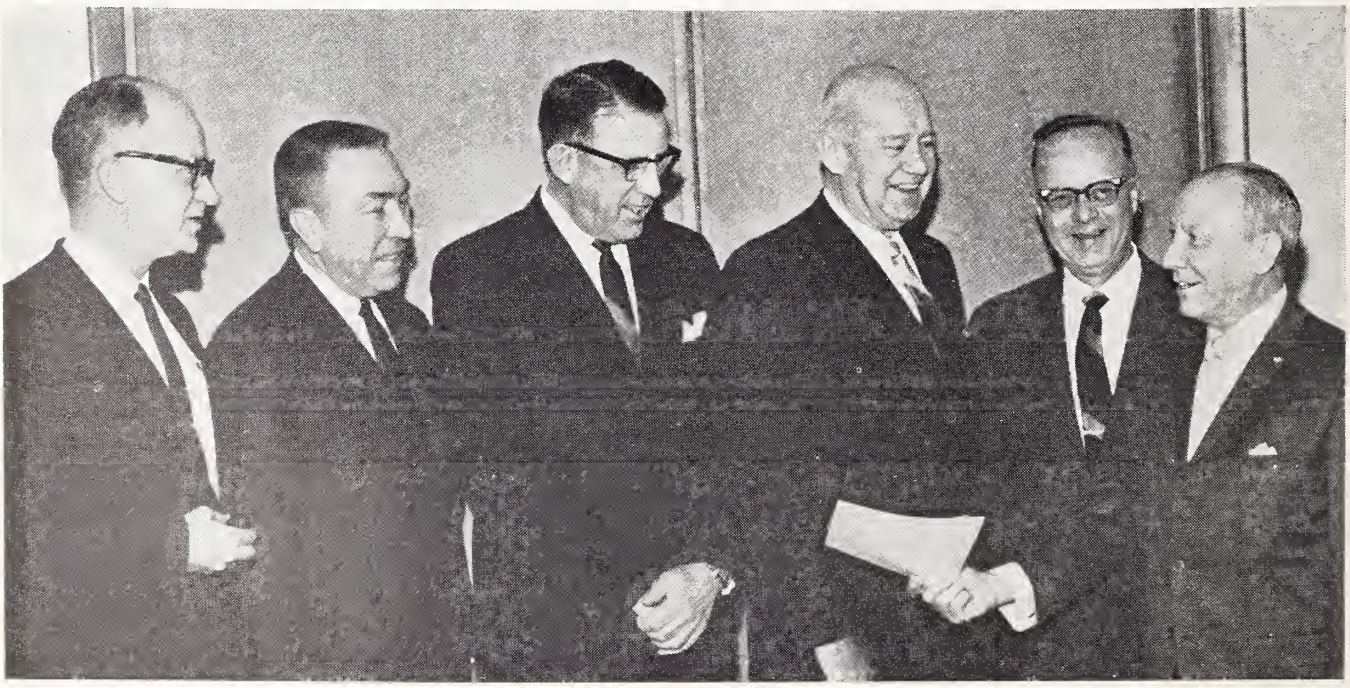
For Iowa, Dr. Smith said, increased matching under Title 19 will bring approximately $13 million more of federal funds without any rise in state expenditures, as soon as a Title 19 program is set up, but the attorney general has ruled that the Legislature must first pass enabling legislation for a Title 19 program.

"Task Force 19," a Medical Assistance Advisory Council will be formed to assist the Welfare Department in planning and programming Title 19 of the Medicare Act. This Council will consist of health and related professions personnel.

KENNETH E. LISTER, M.D.

Dr. Kenneth E. Lister, of Ottumwa, summarized the history of the Iowa Medical Society's Usual and Customary Fee Survey Project and its use of the resulting data in the implementation of the usual and customary fee concept. He had served on a subcommittee of the Board of Trustees which was charged with developing recommendations on the utilization of the survey data.

After reminding his audience of the instructions from the 1964 IMS House of Delegates that a survey be undertaken to determine the fees of Iowa physicians, Dr. Lister reviewed the efforts of the committee that was given that assignment. He praised the chairman, Dr. C. V. Edwards, Sr., of Council Bluffs, and the other physicians on the committee, for their extensive effort in the fulfillment of this task. He explained that the committee devised a survey questionnaire containing 647 items, with help from several interested speciality groups, and that the questionnaire and six informational mailings were distributed to 2,016 physicians determined to be in active practice. More than 1,500 questionnaires were returned, for a response of approximately 75 per cent. Categorized by county and tabulated by procedure, under



These were the speakers at the afternoon session (from left to right): Mr. Robert B. Throckmorton, Mr. Carl A. Tiffany, Dr. Cecil W. Seibert, Dr. Elmer M. Smith, Dr. Kenneth E. Lister and Dr. Donovan F. Ward (presiding officer).

the guidance of the committee, the basic data from the survey are now compiled in two volumes, each of 750 IBM pages.

Out of the 647 procedures surveyed, Dr. Lister explained, it became apparent that approximately 100 items represented the bulk of the medical work performed in the state. As a result, the committee's final deliberations centered on those 100 procedures.

For purposes of record, Dr. Lister reported, responses contained in the questionnaires have been entered in the two master volumes, even though some of the responses clearly indicated clerical errors or misunderstandings of the questions. Study and purification of the survey data by the committee concluded in September, 1965, and a report was presented to the IMS Board of Trustees.

It was apparent to the committee, and subsequently to the Board, that though the Society had developed a survey of usual and customary fees, it also had a survey of *unusual* fees. Moreover, it was evident that if the survey information, compiled in the form of a range of low to high responses, were delivered to a county society, the Society would soon be committed to a fixed fee schedule, and that the response at the high end of each range would become the recognized and inflexible fee.

After studying the matter, Dr. Lister reported, the Board of Trustees developed recommendations, and the Executive Council adopted the following stipulations: (1) The data obtained in the survey are to be considered classified information. (2) Data may be provided to a county society for the 97 designated procedures for use in local negotiations upon the written request of a county society officer. (3) The data may be made available to any member of the IMS insofar as it relates to his own county and only for specific and limited procedures, provided also that he comes to the state Society office and refers to the data there. (4) The data can be made available on a discretionary and limited basis to third parties involved in statewide programs.

Dr. Lister explained that the reluctance of the IMS to become tied to a fixed fee schedule led to its hiring Mr. Carl A. Tiffany, an actuarial consultant. Mr. Tiffany, Dr. Lister said, has now brought this massive amount of survey data down to a point where it will be useful in determining medical care costs and in administering claims programs, and has devised a formula for determining median fees and weighted-mean figures. These, Dr. Lister indicated, are the figures which will be made available, on request, to county societies.

In keeping with established Society policy, the IMS Executive Council has said that future negotiations with third parties shall be only on the basis of usual and customary fees. The fixed fee schedule, Dr. Lister concluded, is a thing of the past.

MR. CARL A. TIFFANY

Mr. Carl A. Tiffany, of Chicago, Illinois, was invited to elaborate on his recommendations to the Society. Iowa, he said, has an unusual opportunity to break away from the inadequacies of fee schedules in ranges of dollars, which have plagued most previous attempts at implementation of the usual-and-customary-fee concept. A choice presents itself, he said, between publishing a range of fees or some type of average. The range of fees is inadequate, because it tells nothing about the usual and customary fee. The maximum fee stated may actually represent only five per cent, one per cent or even less than one per cent of the procedures performed. Though this approach provides *facts* about fees, it gives but very little *information* about them.

Mr. Tiffany contended that the weighed mean fee is the appropriate figure to use in negotiations, for it is the one in which actuaries are interested. The weighted-mean fee for a given procedure is the amount which, when multiplied by the number of times the operation is likely to be performed, determines the amount of money that must be budgeted for it in any third-party program. In any use of the mean-fee approach in negotiations, he emphasized, one must make it abundantly clear that the figures do not represent the exact fees which will be charged by all physicians in the area. Rather, it should be underscored that some physicians will charge more and others will charge less, but that the average is as represented.

Second, in the area of review and adjudication of claims, a county review committee may find it necessary and useful to consider the median fee responses. This is different from the mean or average, for when the responses to the questionnaire were tabulated, it was found that in actuality more physicians were charging less, than were charging more than the average. The median fee, Mr. Tiffany explained, is a unique function of the mean, and is dependent upon the shape of the distribution curve. The median is that point in the distribution where half of the doctors charge more, and half of the doctors charge less. It is by applying a formula to the weighted mean, Mr. Tiffany pointed out, that the corresponding median results.

In concluding his remarks, Mr. Tiffany declared that the results of the survey are now in a usable, understandable form, and that if they are applied understandingly, they will permit the realization of a true usual and customary fee program responsive to the dynamic economics of medical practice as they exist now and will exist in the future.

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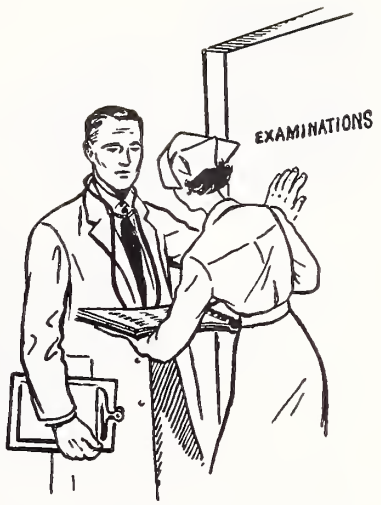

How Much Fidelity Bond?

HOWARD D. BAKER
Waterloo

Even with the most trusted employees, and under the most ideal system of internal control, employee dishonesty can and does occur. In fact with a system any less than ideal, an employer may be encouraging such dishonesty. It is also a time-worn fact that embezzlements occur in places where, and at times when, they are least expected.

In addition to providing decent working conditions, reasonable hours, adequate wages and opportunities for advancement, employers have a moral obligation to safeguard their employees' integrity by doing everything possible to deter them from embezzlement or theft. No system of accounting or internal control has yet been devised which will absolutely guarantee against dishonesty, yet much can be done to keep an inherently honest employee from yielding to temptation in a moment of weakness or under the stress of financial worry.

Following are some important features of an adequate internal control system. If any of these points are not operative in your office, you should discuss them with your management consultant or accountant:

1. Is the mail opened by a trusted employee, *other than* your bookkeeper or cashier?
2. Is a list of mail receipts, classified as to checks, cash or money orders, prepared by this person and regularly checked against the daybook?
3. Are receipts issued for all moneys received, and are all unused receipts accounted for as they are used or spoiled? (Receipts should be serially numbered.)
4. Is cash reconciled or balanced daily, and is it subject to check by someone other than the person responsible for the reconciliation?
5. Are all cash receipts deposited daily, and is responsibility for making those deposits fixed on one person?
6. Are all overages and shortages reported promptly?
7. If cash withdrawals are made, is a voucher showing the amount and the date signed by the person receiving the funds? (Cash withdrawals of any type are potentially dangerous and should not be made.)
8. Is cash physically safeguarded to prevent a dishonest employee from blaming "outside theft" in case of shortages?
9. Are the daybook, accounts receivable and patient case histories spot-checked periodically for discrepancies and irregularities?
10. Are all employees handling cash receipts covered by fidelity bonds or dishonesty insurance?

These and other safeguards will provide *maximum* protection against employee dishonesty, but, as was previously stated, they do not constitute *absolute* protection.

Much has been said about fidelity bonds. The problem is "how much?" After considering the matter thoroughly, we feel that the following simple formula for determining risk exposure is valid and can be used in dental and medical offices:

1. 10 per cent of annual gross receipts	$.....
2. 10 per cent of current assets (cash on hand, bank accounts, securities and drug and supply inventories)	$.....
Total risk exposure	$.....

The following amounts of insurance should be carried:

Total Risk	*Bond*
Up to $25,000	Equal to exposure (Minimum $10,000)
$ 25,000 to $125,000	$25,000 to $ 50,000
$125,000 to $250,000	$50,000 to $ 75,000
$250,000 to $500,000	$75,000 to $100,000

Remember that no one is immune to employee dishonesty. Your only assurance of maximum protection is a system of adequate internal control, plus bonding for each employee who has access to moneys or valuable property in your office.

Cervical-Cancer Detection Project For GP's

On July 24, 1965, a western regional meeting of chairman of *ad hoc* committees on cervical-cancer detection of component chapters of the American Academy of General Practice met at the Hilton Hotel in Denver, Colorado. They represented all but one of the states west of the Mississippi, and their meeting followed one held in the East for chapters in that part of the country, at which the representation had been just as nearly complete. Thus it can be surmised that all but two state chapters will be participating in the study that is to be described below. Also present were a number of doctors representing the American Academy of General Practice and the United States Public Health Service:

The component chapters of the American Academy of General Practice were asked to cooperate with the USPHS in a cervical-cancer detection project, for statistical purposes.

The USPHS and many well-informed physicians think that patients seen in mass screening projects or seen in the clinical programs of large institutions perhaps are not followed as well as they could be by their respective personal physicians. Indeed, it is conjectured that as many as four out of 10 "suspected" cases may be lost in the shuffle of paper work, lack of interest, or failure of follow-up. It is thought that individual physicians' greater interest in and rapport with the patients can be the means of cutting those losses. Therefore, this project is aimed at proving the ability of the general practitioner to practice preventive medicine; to prevent death and disability from cervical cancer in all patients under the care of general practitioners; and to demonstrate the high five-year survival rates among females who are married or have been married, and in whom cancer of the cervix has been detected through routine Pap-smear examinations.

Each state chapter of the AAGP will be asked to sponsor a program for the detection of cancer of the cervix, and to appoint an *ad hoc* committee to take responsibility for initiating and implementing that program. Each organizational unit will consist of eight to 15 general practitioners, and there will be from three to five such groups within each state. The chairman of each such group will notify the Public Health Service's project officer when his group has been set up, and the officer will visit the group, will furnish case-record forms and information about the project, and will answer questions about procedures so as to insure uniformity in carrying out the study.

Participating practitioners will do Pap smears during a one-year period on as many patients as feasible. These smears will be sent to selected local pathologists, and separate records will be kept on all study cases. These reports will be forwarded through designated channels, ultimately arriving at the Statistical Division of USPHS. Results of diagnostic and treatment procedures, including a repeat smear and biopsy, will be reported via the same channels, and annual summary reports will be made on all cases. Five-year follow-up results will be secured on all proved cases of cancer.

Local funds will not be requested. Costs of the actual tests will be borne by the patients, as per local custom, and costs of the collection of data and the compilation of statistical reports will be borne by the Cancer Control Program of the USPHS Division of Chronic Diseases. The implementation of this project is currently under study by an *ad hoc* committee of the Iowa Chapter consisting of Clyde J. Smith, M.D., Gilmore City, chairman, Harold Moessner, M.D., Amana, and Lee Rosebrook, M.D., Ames. Their study and resultant plans for implementing the project in Iowa will be subject to the approval of the Board of Directors of the Iowa Chapter, AAGP.

This seems an extremely worthwhile project, not only for the prestige of the local AAGP chapter but for the welfare of Iowa women. In addition, it will provide comparisons between the incidences of the disease in this state and in the country as a whole, and between the efficiencies of follow-up here and elsewhere.

It should help to reassure the public and the medical profession that the general practitioner is a capable and resourceful physician, whose rapport with and interest in specific patients and their illnesses should not be underestimated.

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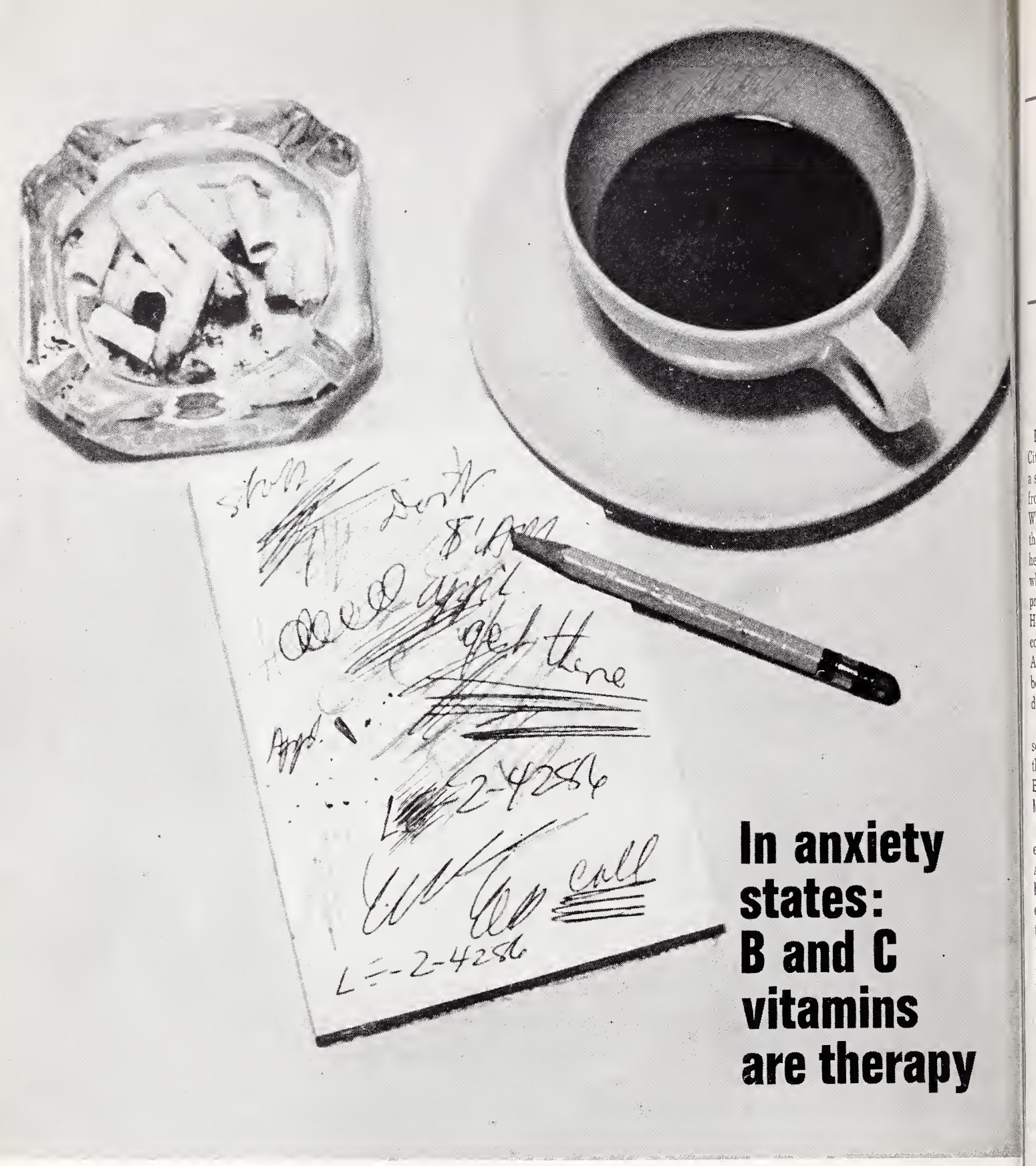

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Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
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STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Diagnosis and Therapy of Plasmodium Falciparum Malaria

During the week of January 24, the Davenport City Health Officer reported a case of malaria in a service man who had been stationed in Vietnam from August 15, 1965, to December 6, 1965. While he was in service in Vietnam, he reports that many of his buddies developed malaria but he remained well. He took Atabrine regularly while in service. Atabrine was discontinued promptly, however, after his return to the States. He was discharged about December 11. He first consulted physicians in Davenport on January 11. Although ring forms of the malaria parasite have been found in his blood, the strain has not yet definitely been established.

For Iowa physicians, we are publishing here a section of the Malaria Special Report 66-1 from the Surveillance Section of the Epidemiology Branch of the U. S. Public Health Service released January 17, 1966.

"The Department of the Army has submitted an editorial to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION concerning the need for physicians to be alert to the possibility of falciparum malaria developing in individuals who have traveled through or served in Southeast Asia. They warn that 'presenting symptoms may include gastrointestinal or musculoskeletal complaints, unexplained high fever, postural hypotension, medical shock, irrational behavior or delirium. Rapid diagnosis and initiation of therapy are of the utmost importance. Because routine thin blood smears are less apt to show the parasite in falsiparum than in other forms of malaria, the use of repeated thick smears is advised in any patient with an obscure illness with a background which raises the potentiality of malaria infection.'

"*Chemotherapy—Falciparum Malaria.* The following is an outline for current treatment of falciparum malaria adapted from a guideline prepared by the Department of the Army, Office of the Surgeon General, and modified and supplemented by recommendations by the Laboratory of Parasite Chemotherapy, National Institute of Allergy and Infectious Disease, National Institutes of Health, Bethesda, Maryland. This outline is presented here because of the increasing possibility that resistant malaria will be encountered in domestic medical practice as a result of the increasing numbers of servicemen returning from South Vietnam. It should be noted that resistance of P. falciparum to chloroquine has been confirmed only in certain areas of Colombia,[2] Brazil,[3] Cambodia,[4, 5] Malaya,[5, 10] South Vietnam[6] and Thailand.[7-9]

"1. Probably in most cases of previously untreated falciparum malaria, the standard chloroquine regimen as outlined in the booklet 'Control of Communicable Diseases in Man,' 10th Edition, 1965, an official report of the American Public Health Association, will prove effective. This consists of an initial dose of chloroquine phosphate, 1.0 gram (600 mg. of base), followed by 0.5 gram (300 mg. of base) six hours later, and then 0.5 gram once daily for the next two successive days for a total dose of 2.5 grams (1.5 grams of base) of chloroquine phosphate in three days. If the patient is unable to take or retain chloroquine given orally, the drug may be given as the hydrochloride, 250 mg. intramuscularly, and repeated in six hours, switching as soon as possible to the oral medication. This regimen should be employed initially for patients with any type of malaria who are not critically ill and for whom the history does not indicate that such a course of therapy has already been administered.

"2. In patients with P. falciparum malaria who (a) are gravely ill or (b) have not responded to the chloroquine treatment described above or (c) have a recrudescence despite a previous response to a course of chloroquine, the treatment of choice is quinine. This is administered as quinine sulfate 0.65 gram (two tablets of 5 grains each) every eight hours for seven to ten days. Because of a variable tendency to develop postural hypotension, patients should be kept at bed rest during quinine administration. The urine output should be measured and if oliguria develops, quinine should be temporarily discontinued. During oliguria, quinine blood levels may rise precipitously and acute quinine toxicity may ensue.

"3. If the patient is unable to retain quinine

because of vomiting, or when coma, presumed due to falciparum malaria, is present, the drug may be given intravenously. It must be emphasized that this treatment carries a *serious hazard* and should be resorted to only when the patient's condition clearly warrants the risk and no other form of treatment is possible. Quinine is administered intravenously as the dihydrochloride, 600 mg. in 600 cc of normal saline, by *very slow* intravenous drip with constant monitoring of the blood pressure and the pulse to detect hypotension or arrhythmia. The same intravenous dose may be repeated at intravals of eight hours if the patient's condition requires. Oral therapy, by stomach tube if neccessary, should be utilized as soon as possible.

"4. Patients who respond to quinine therapy but later undergo recrudescence should be retreated with quinine as described above. If necessary, the course of quinine may be maintained for 21 days at a dosage of 0.65 grams (10 grains) every eight hours, as tolerated.

"5. If asexual parasites persist during quinine therapy, regardless of the clinical response, the patient should receive a course of pyrimethamine (Daraprim), 50 mg. daily for *three days* concurrently with sulfadiazine, 0.5 gram every six hours for five days. Careful attention should be given to maintaining adequate hydration during this therapy."

For assistance in confirming the diagnosis of malaria, Iowa physicians should send thick and thin blood smears to the State Hygienic Laboratory at Iowa City. After study in our home state laboratories, the smears will be forwarded to the Communicable Disease Center, Atlanta, Georgia. Physicians requesting the fluorescent antibody test for malaria may submit 5 cc of blood serum to the State Hygienic Laboratory for transfer to the Communicable Disease Center.

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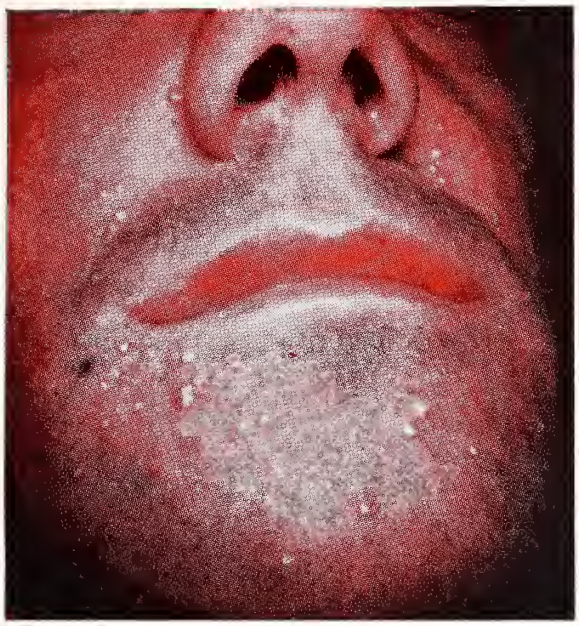
Morbidity Report for Month of January, 1966

Diseases	1966 Jan.	1965 Dec.	1965 Jan.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	413	400	358	Jefferson, Johnson, Kossuth
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	166	122	621	Blackhawk, Grundy, Scott
Whooping cough	1	0	13	Cerro Gordo
Brucellosis	5	10	11	For the State
Chickenpox	730	995	1338	Dubuque, Polk, Scott
Meningococcal meningitis	2	2	0	Jefferson, Polk
Mumps	269	266	487	Dubuque, Mills, Polk, Winnebago
Poliomyelitis	0	0	0	
Infectious hepatitis	23	31	116	Grundy, Pottawattamie, Dubuque
Rabies in animals	16	12	24	For the State
Malaria	1	0	0	Scott
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	24	30	24	For the State
Syphilis	65	66	71	For the State
Gonorrhea	243	311	154	For the State
Histoplasmosis	4	3	2	Dubuque, Johnson, Linn, Scott
Food intoxication	0	200	0	
Meningitis (type unspec.)	2	0	3	Iowa
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	3	1	
Salmonellosis	3	10	5	Polk, Tama, Wapello
Tetanus	0	0	0	
Chancroid	0	1	0	
Encephalitis (type unspec.)	0	0	1	
H. influenzal meningitis	1	0	1	Scott
Amebiasis	1	2	1	Boone
Shigellosis	7	4	3	Linn
Influenza	0	0	3	

TOPICAL TREATMENT

TYPICAL RESULTS



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AND SALINE COMPRESSES

with 'NEOSPORIN'® brand

Polymyxin B-Neomycin-Bacitracin

ANTIBIOTIC OINTMENT

Each gram contains:

'Aerosporin'® brand Polymyxin B Sulfate ..... 5,000 Units

Zinc Bacitracin ..... 400 Units

Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) ..... 5 mg.

Tubes of ½ oz. and 1 oz.

- clinically effective
- comprehensive bactericidal action against most Gram-negative and Gram-positive organisms, including Pseudomonas
- rarely sensitizes

For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

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Iowa Association of Medical Assistants

Organize Your Medical Library

Has the spring-cleaning bug invaded your office yet? Of course it's too early, for we're still mopping up mud and snow, but haven't you started to think about it? Look at that stack of journals and the shelf overflowing with pamphlets and periodicals your doctor has been saving all year. Well, before you get the urge to pitch, start looking through them and set up your own reference file and library. It's just as easy to do as that!

Medicine differs from many other fields in that its progress is so rapid that the doctor and his alert assistant can never stop studying. It's a constant struggle to keep abreast of what's new. We are often called upon to clip and file articles, to maintain an indexed reference library, or to abstract an article. An assistant who can abstract can save her doctor the time he would take in reading 10 to 20 pages by focusing his attention upon the information of particular interest to him.

What is an abstract? It is a condensation of a published article in which every material fact of the original article has been retained so that reference to the original article is unnecessary, except for amplification. You may use your own style and phraseology, but the facts must not be altered in any way. The heading for the abstract should include the author's name and initials, the title of the article and the name of publication in which it originally appeared, and the volume, year and pages.

Another form of condensation is a digest. This is designed for distribution, and it contains only the most important features of the original article, but it consists of a series of exact quotations and thus is in the author's own style and records accurately the author's thesis.

The first step in organization is an indexed card catalog. A 3 x 5 card file can usually be accommodated in a desk drawer or a separate file on the library shelf. Each publication, article or clipping should have three file cards: a subject card, an author card, and a title card. You may question the necessity for all this information in triplicate (or quadruplicate, depending on subject matter) but experience will show that cross references are necessary. These cards are then filed in a lexicographic file (all entries alphabetized together), or in a file separated into author, subject and title sections.

The indexed file can serve more than one purpose. Included, also alphabetically, may be the information cards supplied by pharmaceutical companies on their products, listing dosages, ingredients, how supplied, indications or contraindication for usage. A card might bear the name of a disease and specific forms of treatment and the name of the patient involved for quick reference. "Who does it?" could also be included in your file, or a variety of other information filed according to the doctor's instructions.

Your index is prepared; now how is the library organized? Books are classified by subject groupings; those dealing with related topics are placed together. Journals and periodicals are placed alphabetically and chronologically. Abstracts, reprints, clippings, etc., should be placed in a folder or binder under subject headings. Choose the subjects most commonly used in your particular office. If surgery is your doctor's specialty, then your files can be prepared for the various subheadings such as chest, abdominal, orthopedic, cardiac, EENT, etc. If not, then you will probably need no subheadings under surgery but probably will need them under something else.

If a folder is used for clippings or condensations, a page for cross references should be included. For instance, an article on childhood diseases and their treatment or prevention would be filed under Pediatrics. A cross reference should be made to a similar article filed under Immunology, or to title, author and page number of a textbook in the doctor's volume library.

Many doctors prepare abstracts by dictating the salient points that they want typed on cards for filing. Some professional journals contain abstracts of articles which your doctor may check and ask you to secure for him. These can be borrowed from a medical library and copied on the typewriter. You may write to the journal for a single copy, or to the author for a reprint.

All your clippings on collections, insurance forms, and office shortcuts, and catalogs of office equipment and supplies, etc., can be filed systematically in the library, too. They are *your* reference collection; put them where you can find them readily and put them to good use.

—*Helen G. Hughes*

WOMAN'S AUXILIARY
to the
IOWA MEDICAL SOCIETY

1966 Annual Meeting, Des Moines

Program Theme: "Planning, Participation, and Progress"

MRS. HENRY BOE, *Presiding*

Sunday, April 24, 1966 (Hotel Kirkwood)

2:00 p.m. Registration for Board Members—Main Lobby, Hotel Kirkwood

2:30 p.m. BOARD MEETING—Iowa Room, Hotel Kirkwood—State officers, committee chairmen, county presidents

7:00 p.m. SOCIAL HOUR AND SUPPER (Dutch) for Board members, convention chairmen and their husbands—Colonial Room, Hotel Kirkwood

Monday, April 25, 1966 (Hotel Kirkwood)

8:00 a.m.-3:00 p.m. REGISTRATION, Main Lobby. Luncheon tickets and HELF Benefit Dance tickets available in the Registration Area

8:00 a.m.-8:45 a.m. Coffee and sweet rolls served in the West Room

9:00 a.m. FORMAL OPENING OF THE 37TH ANNUAL MEETING—Capitol Room

Call to Order—Mrs. Henry Boe, president, presiding

Invocation—Mrs. W. A. Seidler, past-president

Pledge of Allegiance to the Flag

Pledge of Allegiance to the Woman's Auxiliary—Mrs. A. C. Richmond

Greetings—Mrs. D. W. Coughlan, chairman of Committee on Arrangements

Roll Call of Delegates—Mrs. L. H. Prewitt, recording secretary

Introduction of Guests—National and past state presidents

Convention Rules of Order—Mrs. L. H. Prewitt

Presentation of Annual Meeting Agenda—Mrs. Henry Boe

Minutes of 36th Annual Meeting, 1965—Mrs. L. H. Prewitt

Treasurer's Report—Mrs. Byron Merkel, treasurer

Presentation of the Auditor's Report—Mrs. Byron Merkel

Presentation of the Budget—Mrs. E. E. Vorisek

Report of the President—Mrs. Henry Boe

Report of the President-Elect—Mrs. R. E. Hines

Nominations for 1967 Nominating Committee—Mrs. D. C. Wirtz, parliamentarian

10:15 a.m. "Accent on Progress" from our County Presidents

Western Area—Mrs. H. E. Rudersdorf, past-president, Woodbury County, presiding. (Cass, Clay, Dickinson, Lyon, Monona, Montgomery, Osceola, Palo Alto, Pottawattamie, Shelby, Sioux, and Woodbury.)

Central Area—(Appanoose, Boone, Cerro Gordo, Dallas-Guthrie, Greene, Hamilton, Mahaska, Marion, Polk-Warren, Wapello, Webster, Worth, Wright.)

Eastern Area—Mrs. James F. Bishop, councilor of District VIII, presiding. (Black Hawk, Buchanan, Clinton, Dubuque, Grundy, Jefferson, Johnson, Lee, Marshall, Scott.)

Timekeepers: Mrs. F. M. Skultety, councilor, District VII
Mrs. J. B. Dixon, councilor, District II

11:00 a.m. "Your Place in the Pattern"—S. P. Leinbach, M.D., president-elect of the Iowa Medical Society, and chairman of the Auxiliary Advisory Committee

11:30 a.m. Report of Delegate Registration—Mrs. L. D. Rodgers, credentials chairman

11:40 a.m. Voting for Nominating Committee, National Delegates and National Nominee. (National Convention, Drake Hotel, Chicago, June 26-30)

Tellers: Mrs. Wallace Rindskopf
Mrs. C. W. Latchem
Mrs. W. J. Morrissey

12:15 p.m. LUNCHEON—All physicians' wives are welcome—Arbor and Orchard Rooms, Hotel Kirkwood—Honoring members of the Auxiliary Board.

Grace—Mrs. W. R. Hornaday, past-president

Presentation of AMA-ERF Awards—Mrs. Ralph Wicks, chairman AMA-ERF Committee

Mrs. F. P. Ralston, chairman, International Health, introducing

Dr. G. M. Arnott, Solo—"The Theme of Hope," Mrs. G. M. Arnott, accompanist

Introduction of State Committee Chairmen—Mrs. Henry Boe

Mrs. M. E. Olsen, Second vice-president introducing Mrs. R. H. Heise, chairman HELF, and honoring Mrs. W. R. Hornaday, first chairman of the Nurses' Loan Fund—25 Years of HELF

"The Nursing Profession"—Dr. Laura C. Dustan, dean of the College of Nursing, University of Iowa, Iowa City

Tuesday, April 26, 1966 (Hotel Kirkwood)

8:00 a.m.-12:00 noon REGISTRATION—Main Lobby

8:00 a.m. Area Planning Session for selection of Area Chairman for 1967 Annual Meeting. *All Auxiliary members residing in Eastern Area to attend.* Mrs. A. C. Richmond, presiding

8:00 a.m.-8:45 a.m. Coffee and Rolls—Kirkwood Room

9:00 a.m. CALL TO ORDER—SECOND SESSION OF THE 37TH ANNUAL MEETING—Mrs. Henry Boe, presiding

Reading of the minutes of April 25 meeting—Mrs. L. H. Prewitt, recording secretary

Teller's Report on Election of 1967 Nominating Committee

Amendments to the By-Laws—Mrs. D. W. Coughlan, chairman

9:45 a.m. Memorial Service—Mrs. D. A. Mater—Music by Mrs. C. R. Burroughs

Courtesy Resolutions—Mrs. M. O. Larson, area chairman for 1966 Annual Meeting

Credentials and Registration Report—Mrs. L. D. Rodgers, chairman

10:00 a.m. Speaker—National Representative, Mrs. Asher Yaguda

10:30 a.m. "Do You Know?"—Frank Woolley, AMA Field Service Division

11:00 a.m. Homebound Handcraft Activities—Mr. Fred Kelly

11:05 a.m. Report of the 1966 Nominating Committee—Mrs. S. P. Leinbach, chairman

Election of Officers

Installation of 1966-1967 Auxiliary Officers—Mrs. Asher Yaguda

Presentation of President's Pin and Gavel—Mrs. Henry Boe

Presentation of Past President's Pin—Mrs. H. G. Ellis

Inaugural Address—Mrs. R. E. Hines

12:00 noon LUNCHEON for all physicians' wives—Capitol and Marquette Rooms—honoring retiring president and Auxiliary guests—Mrs. H. G. Ellis, presiding

Grace—Reverend Dale J. Williams, Grace Methodist Church, Des Moines

Introduction of Auxiliary Guests

Presentation of Essay Awards—Dr. Frank G. Ober, president of the Iowa Medical Society

Presentation of Volunteer Health Service Award—Mrs. Olin Elliott, chairman

"What's New on Capitol Hill"—Senator Jack Miller

2:30 p.m. EXECUTIVE BOARD MEETING—Colonial Room—Mrs. R. E. Hines, presiding

6:00 p.m. IOWA MEDICAL SOCIETY PRESIDENT'S RECEPTION—Hotel Fort Des Moines

7:00 p.m. IOWA MEDICAL SOCIETY BANQUET—Hotel Fort Des Moines

8:30 p.m. CADUCEUS CAPERS—Benefit Dance for Woman's Auxiliary Health Education Loan Fund—Grand Ballroom, Hotel Fort Des Moines

A Doctor's-Day Toast

Raise the glass to our doctors, the men in our lives;
Here's a toast from the girlfriends, the Good Doctors' wives!
We really don't mean it, though often we "gripe"
When the steak that's been waiting is tougher than tripe;
It's not for ourselves, but we're sorry for you
When the meal we are eating is long overdue.
We could weep when you eat that dry roast at eleven
To think what you missed by not dining at seven.
We knew away back in the days that we courted
That the good and the bad would come oddly assorted;
That the patient whose baby was near due, by chance
Would go into labor the night of the dance.
You took off for the hospital, we took off that new formal,
We weren't surprised—the situation was normal.
Another child's illness, we knew, is more vital
Than Junior's big game or Susie's recital,
And Junior and Sue understand their position—
Daddy's not there because Dad's a physician.
But, oh, when that phone rings at six-forty-five,
Seconds before dinner guests will arrive,
And we hear those sad words that we dread to hear most—
"Carry on with the party, dear,—minus the host!"
But in this old world there are many worse fates
Than traveling through life as Good Doctors' mates.
It's a pleasure and privilege to walk by your sides,
To help you and love you whatever betides.
Raise the glass to our doctors, the men in our lives,
Here's a toast from the girlfriends, the Good Doctors' wives!

Mrs. Jordan Kelling, president of the Woman's Auxiliary to the Southern Medical Association, composed and read this "Doctors'-Day Toast" at a luncheon held during a Missouri State Medical Auxiliary Convention.

It was written to salute a particular physician in a particular part of our country, but it is very appropriate since our annual Doctors' Day is March 30.

News From Around the Hawkeye State

Black Hawk County

The Woman's Auxiliary to the Black Hawk County Medical Society held its annual ball on February 19 at the Holiday Inn, in Waterloo. A mardi gras theme was used for the annual costume party entitled "Coronation Ball." Proceeds from the party will be used to provide special equipment at the four area hospitals, St. Francis, Schoitz Memorial and Allen Memorial, all in Waterloo, and Sartori Memorial Hospital, in Cedar Rapids.

"The Medicats," an orchestra composed of Waterloo doctors and doctors' wives, provided the pre-dinner music. The members of the group are Drs. Andrew C. Smith, Thomas R. Updegraff, Dale

Everson, Lewis B. Harned, Robert D. Buckles, and Richard Waldorf, and Mrs. O. W. Hall, Jr., and Mrs. R. D. Acker. Ornate masks were made by Auxiliary members for the Coronation Ball, and were sold at the door. The committee chairmen were Mrs. Edward Sitz, Mrs. Robert Miller, Mrs. Vern Plager, Mrs. Dwight Conklin and Mrs. George Heine.

The Auxiliary held a luncheon meeting in January at the home of Mrs. Richard Mitchell. The guest speaker, Dr. Harold Korner, of the Mental Health Center, spoke about the concern for mental health.

The Future Nurses' Club Committee is trying to form a club at Waterloo East High School. On March 10-12, the Auxiliary will hold its annual homebound handcrafts sale.

Cerro Gordo County

At the November meeting of the Cerro Gordo County Auxiliary, Mr. Leas, the executive director of the "Area Sheltered Workshop" was the guest speaker. He presented a most interesting and informative program on the activities and progress of this North Iowa project. The Workshop is sponsored by the Easter Seal Society, and provides meaningful activity and gainful employment for the mentally and/or physically handicapped. Persons who would otherwise not have opportunities to work or play with normal people are greatly benefitted. The Workshop requires patience and dedication from the people who supervise it, and the helpers must be people who are willing to give their time and encouragement to the less fortunate. Some of our Auxiliary members are devoting time and talent to this project. We hope more of them will become interested.

In December, the Auxiliary invited members of the Future Nurses' Clubs at our two high schools to be guests at its meeting. Some 50 girls and sponsors attended. Connie Sahr, a Mason City girl who is a first-year student at St. Luke's, Cedar Rapids, spoke on the experiences of a student nurse. She related frankly and with some humor the fear, anxiety and, finally, satisfaction and pride of living through the first few weeks. She says all of those emotions are normal parts of a student nurse's training. Connie had received a loan from the Auxiliary. The Future Nurses seemed to enjoy the informality of the evening. They asked questions, discussed their plans and expressed enthusiasm about a future in the health-careers field.

At our meeting on Friday morning, January 28, Mrs. Tice, the vice-president, showed slides and told of the vacation she and her family enjoyed in Europe last summer.

—MRS. CARROLL O. ADAMS, *President*

Lee County (North)

The service projects of Lee County (North) Auxiliary have included sending 200 pounds of rummage to Monte Vista, Colorado, for the Indians there, and making "Johnny Coats" that will be sent to World Medical Relief, Inc., Detroit. As individuals, a number of Auxiliary members are planning and preparing to participate in the crippled children's clinic which will be held locally in March.

As money-making projects, a rummage sale and a silent auction were held. The first project netted $51.65, and the latter project netted $12.50.

Social activities have included a holiday dinner for all of the staff doctors and their wives or widows, given by the sisters of the Third Order of St. Francis, at Sacred Heart Hospital. The Auxiliary presented the sisters an engraved "Paul Revere" silver bowl.

—MRS. ROBERT E. MURPHY, *President*

Polk County

On January 14, members of the Polk County Auxiliary had luncheon at the Des Moines Club. The speaker was Mrs. Elizabeth Parker, executive director of the Community Blood Bank of Central Iowa, and her topic was "What the Community Blood Bank Should Mean to You."

The Polk County Medical Society sponsors a monthly medical forum on KDPS-TV, in which panels of doctors answer phoned-in questions on various topics. The wives of the doctors on each panel man the telephones for incoming calls. The January panel discussed venereal diseases, and the February panel discussed heart problems and high blood pressure. The response from the lay audience has been tremendous.

The February 11 luncheon was held at the Hawley Building, and the guest speaker was Mrs. Mary Peacock. She talked on "The Coordination of United Community Services and Boards." On February 12, the Auxiliary entertained foreign students at a luncheon in the Kirkwood Hotel.

On Wednesday, March 16, several members of the Auxiliary are to attend Polk County Day at the Woodward State School. The tour is sponsored by the Polk County Association for Retarded Children.

—CHARLOTTE FROM, *President*

Scott County

When I look back upon the action that has taken place since our organization acquired a Community Service chairman, it is difficult for me to imagine a Scott County Auxiliary without one. Mrs. Robert Foley and her committee began pumping new and vital life into our group last April when they organized volunteers to cooperate with the Scott County Chapter of American Red Cross during the Mississippi River flood; to help the Scott County Medical Society with typhoid immunizations; and then in May to help in hosting the Tri-State Blood Banks convention that was held in Davenport.

During that time and ever since, she and her committee have contacted all of our members to learn their particular areas of interest and competence, and whether they will be available, in any future emergency situations, and have made that information a part of our files. Additionally, last fall, upon the recommendation of the Homemaker Service of Scott County, members of our organization have transported a 72-year-old widow with emphysema to and from Mercy Hospital for daily treatments in the cardiopulmonary department there. Her monthly OAA check wasn't quite enough for her other needs and taxi fares too, and without our help she would have had to be hospitalized.

To our list of standing committees was added one on Membership and Promotion. It is the pleasant responsibility of the chairman, Mrs. Alex Boone, to keep our membership records and to offer membership to all eligible and unenrolled doctors' wives. It is hoped that the time will come when that committee can inform the board about the kinds of meetings and other activities that will best suit our members. A St. Luke's Bake Sale Chairman and two co-chairmen for the Mercy Hospital Dance will serve to correlate the work of the Medical Auxiliary and the auxiliaries at those two hospitals. Two changes in our by-laws will (1) raise our yearly dues by $2.00 to a total of $8.00, and (2) change our meeting day from the second to the fourth Thursday of each month, except in November when the meeting will be on the third Thursday, and in December when there will be none.

In an effort to inform members about activities of organizations providing health services in our community, the following programs were arranged by Mrs. F. Ross McFadden. In October, Mrs. Frank Gordon, a past-president of the Mercy Hospital Auxiliary, and Mrs. Frank Nichols, the current president of the St. Luke's Auxiliary, outlined the functions and plans of their respective organizations. In November, Dr. Vera French, of the Scott County Mental Health Center, traced for us the activities leading up to the formation of the Center, and spoke of its plans. In September, Dr. James Bishop, our Auxiliary's adviser, spoke to us on the importance of our participating in community-service projects, and the Scott County Medical Society's current thinking on Medicare.

The "doctor to doctor" Christmas greeting this year was again a smashing success, due to the expert chairmanship of Mrs. Edwin Motto. Mrs. Erling Larson provided the art work for a most attractive card, and the proceeds of the sale, $925, will be presented to the Mental Health Center to use as it sees fit.

Mrs. Motto, who has been chairman of the Mental Health Committee for the past seven months, has transported a juvenile patient between her home and the center for weekly treatments.

On January 4, the doctors' wives were guests for the third consecutive year at the annual meeting of the Scott County Medical Society. The Auxiliary president presented the usual report of Auxiliary activities for the past year.

Mrs. David VanHecke and her committee are at work on an experimental newsletter. It is hoped that this means of informing members will shorten the business sessions at our monthly meetings.

—MRS. JOSEPH KEHOE, *President*

Sioux County

So far this year, the Sioux County Auxiliary has had four meetings—the most recent one having been with our doctor husbands at which the retiring director of the county welfare office was honored. At our meetings we discuss our state projects, the most recent one having been nurse-recruitment and loans.

On November 5, we were privileged to entertain the state officers at a District III meeting, and though only one member from outside our county was present, our members felt they derived a great deal from the meeting.

One of our members assisted with the Sabin clinic in the county. At Sioux Center, three members assist the hospital auxiliary by providing speakers when the annual tea is given for high school girls interested in nursing careers.

We are 100 per cent organized, with two new members this year, and we have sold 20 boxes of notepaper for AMA-ERF.

—MRS. M. O. LARSON, *President*

Wapello County

The Wapello County Medical Auxiliary has been meeting monthly since September. At the November meeting, Dean Jacobs, director of special education in the Ottumwa Public Schools, discussed some of the problems that are brought to his attention—ones ranging from mental retardation to the needs of the superior student. In December, we had a lovely cooperative dinner party with our husbands at the home of Dr. and Mrs. John Dotterer. Fifty-six people attended. During the February meeting, our AMA-ERF giving was emphasized with the showing of the film strip "The Different Drum." It is a short film dealing with the establishment of the new research program in Chicago, financed partially by AMA-ERF funds. We also offered AMA-ERF playing cards for sale.

In March we shall meet again with our husbands for dinner and hear an address by Dr. Donovan Ward, of Dubuque. In April, we hope to invite the Ottumwa dentists' wives and some of the Auxiliary members-at-large to our meeting. We shall view the film strip "The Ship Hope."

Last December, two of our Auxiliary members donated approximately 16 hours of nursing care to the disaster victims in Keokuk.

Our Auxiliary is again assisting a freshman stu-

dent nurse in paying her expenses at the local school of nursing. Our nurses' loan fund allows a girl to borrow money for three years, and if she repays it within one year following graduation, no interest is charged.

—MRS. WARREN DEKRAAY, *President*

Woodbury County

The Sioux Med-Dames, the Woman's Auxiliary to the Woodbury County Medical Society, elected new officers at a recent meeting. They are Mrs. Gerald Rausch, president; Mrs. Martin Blackstone, vice-president; Mrs. Harry Robinson, secretary; and Mrs. Arthur W. Horst, treasurer.

Various committee chairmen were appointed, as follows: Community Service, Mrs. John F. Kelly; American Medical Association Education and Research Foundation, Mrs. Philip Monnig; Homebound Handcraft Sales, Mrs. E. G. Nafziger; Legislation, Mrs. Leonard Boggs; Essay Contest, Mrs. Dwayne Howard; Telephone, Mrs. Horst Blume; Hospitality, Mrs. Donald Kivlighn; and Mental Health, Mrs. Fred Stark.

Mrs. Asher Yaguda

Mrs. Asher Yaguda, of Newark, who is to be the National Auxiliary representative at the Iowa Auxiliary Convention this year, was installed as president-elect of the AMA Auxiliary in June, 1965, after completing a one-year term as first vice-president and a two-year term as a director of that organization. She has also served on the executive committee of the National Board, and she wrote the "Homemaker Guide" which the National Auxiliary published in 1962, and headed the committee which produced the second "Guide" in 1963.

Mrs. Asher Yaguda

She is a graduate of the Yonkers, New York, Hospital School of Nursing, and her husband is a pathologist. They have one daughter and two grandchildren.

Mrs. Yaguda has been vice-president of her county's Republican Women's Club, and has held various offices in the League of Women Voters. She has served on many committees dealing with chronic illness and aging, and pioneered the New Jersey homemaker program. Currently, she is a member of the New Jersey State Welfare Board, of the New Jersey Blue Cross Board, and of the Advisory Council to the Newark College of Rutgers University. She is a past-president of her state Auxiliary, and is now its parliamentarian. Her hobby is American antiques, especially furniture and glass.

Undoubtedly the nicest thing ever said about Mrs. Yaguda was contained in the citation when the Essex County Council of Business and Professional Women's Clubs chose her as its Woman of the Year, in 1959-1960; "She walks with one hand in God's and one in the hand of the needy."

Alphabet for Leaders

A—Appreciate honest effort.
B—Believe in folks.
C—Cultivate effective public appearance and speech.
D—Develop a harmonious working organization.
E—Evaluate mistakes and correct them.
F—Follow as well as lead.
G—Give willingly of your time and effort.
H—Hail latent ability in others and use it.
I—Ignore unkind criticism.
J—Judge wisely.
K—Know the rules (Bylaws, etc.).
L—Learn to delegate responsibility.
M—Make every minute count.
N—Never indulge in personalities.
O—Overcome difficulties.
P—Put personal comparisons aside.
Q—Qualify for the job.
R—Rejoice in the success of others.
S—Serve wherever needed.
T—Take time for all things.
U—Understand the foibles of others.
V—Value teamwork.
W—Welcome constructive criticism.
X—'Xcuse weaknesses in others.
Y—Yearn to be a better leader.
Z—"Zounds"—What a job!

—NEW JERSEY NEWSLETTER

ABC's of Presiding

For county presidents and others who will be or are presiding over meetings, here is good advice from the National Auxiliary parliamentarian, Mrs. Herbert L. Mantz, a recognized authority on parliamentary procedures. It is excerpted from a talk that she gave over radio station KMBC, Kansas City, Missouri:

A Is for Attributes

According to Henry Robert, "The presiding officer should never be chosen for any reason other than his ability to preside." Three necessary qualities are dignity, tact and impartiality. Another authority, Alice Sturgis, has said: "The chairman creates the atmosphere, spirit and the attitudes of a meeting. By his own conduct he emphasizes courtesy, order and mutual consideration."

B Is for Business

The presiding officer must realize first that a field of work is not an assignment of power. The presiding officer has only such powers as the bylaws and/or the parliamentary authority or the vote of the assembly may determine. Usually, she:

1. Presides at all business meetings, boards or executive meetings.
2. Calls meeting to order by *one* rap of the gavel, having determined that a quorum is present. (A quorum is the number required for the legal transaction of business.)
3. Follows the adopted order of business (called "the agenda").
4. Recognizes those addressing the chair, and assigns the floor (sits when she has assigned the floor).
5. States the motion proposed and clarifies it if necessary (stands to state motion and take vote).
6. Restricts discussion to the question at hand—as well as length of debate by members.
7. Votes in case of a tie or when her vote would change the result (always votes when the vote is by ballot and votes last on a roll call).
8. Signs all orders necessary to carry out the will of the organization.
9. Represents the organization to outside persons or organizations.
10. Appoints committees if so directed by the bylaws or by motion of the assembly.
11. Is an ex-officio member of all committees (except nominating committee) *IF* the bylaws so state.
12. Performs such other duties as the assembly or the bylaws may direct.

C Is for Courtesies

Courtesies due the presiding officer:

1. Loyalty, integrity, tolerance ("implied fundamentals").
2. Consideration by members in wording motions properly.
3. Prompt attendance.
4. Presentation of question before discussion.
5. Adherence to the point under discussion (no dilatory or frivolous motions).
6. Courteous acceptance of the loss of the vote on motion favored.
7. Discussion *in* the meeting, not *after*.

Courtesies dispensed by the presiding officer:

1. She refers to herself as "the chair," never as "I" except in committees or informal assemblies.
2. She talks little from the chair.
3. She speaks quietly, maintains serenity, uses the gavel discreetly, eliminates nervous habits.
4. She dresses simply and suitably (flowers are best not worn at business sessions).
5. She arrives and starts meetings promptly.
6. She observes principles rather than technicalities.
7. She comes to meeting rested and prepared, and equipped with gavel, watch, pencil, calendar, notebook with order of business, bylaws and parliamentary authority.
8. She gives credit where credit is due.

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WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Henry Boe, 3919 Orchard Street, Sioux City 51104

President-Elect—Mrs. S. M. Korson, Box 111, Independence 50644

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Corresponding Secretary—Mrs. H. C. Leiter, 2400 E. Solway, Sioux City 51104

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228

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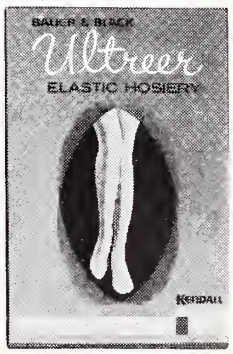

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Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

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Personals

At a meeting of the Audubon Chamber of Commerce on January 13, **Dr. H. K. Merselis** was given its 1965 Community Service Award for his work on local school, church and hospital affairs.

Dr. E. G. Nafziger, of Sioux City, moderated a program entitled "Pulse of Life" at a meeting of District I of the Iowa Nurses' Association, there, on January 17.

Dr. Donovan F. Ward, of Dubuque, immediate past-president of the AMA, was a guest speaker at the annual meeting of the Oskaloosa Chamber of Commerce, in mid-January. **Dr. Sidney Smith,** president of the Mahaska County Medical Society, introduced him. Dr. Ward addressed the Oelwein Rotary Club on January 17.

Dr. Addison W. Brown, a Des Moines obstetrician and gynecologist, commented upon the film "Time and Two Women" and answered questions about uterine cancer in Dunlap on January 28.

The Lions Club of Iowa Falls nominated **Dr. F. N. Cole** for its town's 1966 Community Service Award, saying, "We feel that Dr. Cole is indeed the true community leader, and one we can all feel proud just to have known."

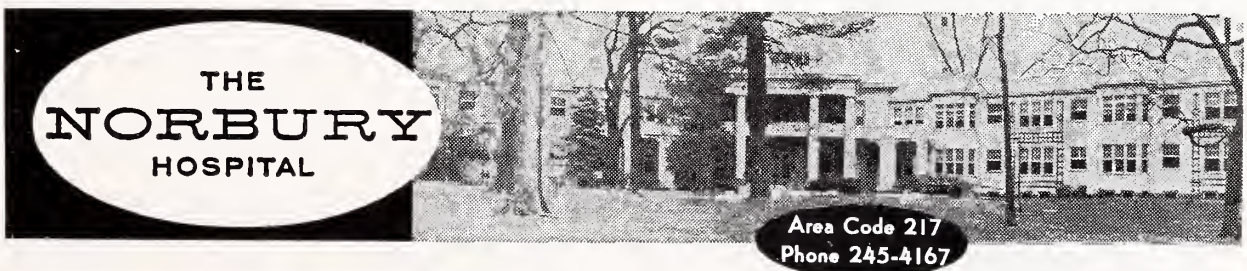
Dr. L. V. Larsen, of Harlan, has been elected president of the Shelby County Medical Society. Other officers are **Dr. W. S. Markham,** vice-president; and **Dr. C. V. Bisgard,** secretary-treasurer. **Dr. J. H. Spearing** is the delegate and Dr. Bisgard is the alternate delegate.

Dr. R. W. Lithancum, of Dysart, is the new president of the Tama County Medical Society, succeeding **Dr. C. R. Roberts,** also of Dysart. **Dr. G. M. Dalbey,** of Traer, has been elected vice-president, and **Dr. A. J. Havlik,** of Tama, has been reelected secretary-treasurer and delegate.

Dr. John M. Rhodes, of Pocahontas, has been named an associate director of Mid-States Enterprises, Inc., a leasing and money-lending firm. He holds the vice-presidencies of the IMS and his county medical society, and is a member of the Pocahontas school board.

Dr. F. B. O'Leary, of Sibley, and **State Senator Jack Schroeder,** of Davenport, were the speakers at an open meeting sponsored by the Osceola County Heart Association, in Sibley, on January 19.

At the annual meeting of the Iowa City Visiting



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Indications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug.

Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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Nurse Association held in the student nurses' dormitory at Mercy Hospital, there, on January 25, **Dr. William J. Morrissey,** coordinator of the Des Moines Home-Care Nursing Program, and **Dr. James F. Speers,** director of regional and community health-services in the State Department of Health were the principal speakers.

Dr. R. D. Liechty, an associate professor of surgery at the U. of I. College of Medicine, was the guest speaker at the Masonic Service Club's ladies night, in Iowa City on January 21.

A request for $350,000 to build a 70-bed addition to the Veterans Administration Hospital at Knoxville was included in **President Johnson**'s budget, six weeks ago. **Rep. Bert Bandstra** (D., Iowa) said the addition of a surgical unit would qualify the institution as a general facility, rather than just a psychiatric hospital.

Dr. Ellis Duncan, of Oskaloosa, discussed the artificial kidney at a meeting of the Mahaska County Nurses Association on January 18. One of the machines will be installed at the Mahaska County Hospital shortly.

Dr. L. E. January, a professor of internal medicine at the U. of I., headed a panel discussion entitled "Hearts and Husbands," sponsored by the Cedar Valley Heart Association, in Cedar Rapids on February 6. It was planned chiefly to help women prevent heart attacks in their husbands, or to plan diets, etc. for their husbands afterward.

At a sectional meeting of the American College of Surgeons that began in Houston at the end of January, **Dr. David A. Culp,** a professor of urology at the U. of I. College of Medicine, read a paper on the current status of radioactive gold in the treatment of carcinoma of the prostate, and took part in a panel discussion on the diagnosis and treatment of genitourinary neoplasms.

Dr. Regis Weland, a Cedar Rapids pathologist, showed the American Cancer Society film "Who, Me?" at the January 25 meeting of the Optimist Club, there. The moving picture is a new one on smoking and cancer.

Dr. Billy Grimmer has been named medical director of the Scott County Mental Health Center, effective June 1. After nine years of general practice in Grinnell, he returned to Iowa City for a psychiatric residency, and will complete it shortly. **Dr. Anthony Pavokvic,** the present medical director, will continue as a psychiatrist on the staff of the Center, as will **Dr. Vera French.** Dr. Grimmer and his family will live in Bettendorf.

Dr. Randolph Ferlic, head of the cardiovascular surgery research laboratory at the University of Minnesota, spoke at an open meeting at St. Anthony's Hospital, Carroll, on January 12. Among other things, he explained the operation of monitoring and resuscitative apparatus that the Hospital Auxiliary recently purchased for use there. He is the son of **Dr. and Mrs. R. J. Ferlic,** of Carroll.

Dr. Ralph Brugger has succeeded **Dr. Howard Hildebrand** as chief of staff at Mary Greeley Hospital, Ames.

Dr. George Hegstrom, an internist at the McFarland Clinic, Ames, addressed a meeting of the Story County Life Underwriters, there, on January 17.

Dr. Jesse L. Saar, Jr. has succeeded **Dr. Robert Allen,** as president of the Des Moines County Medical Society. Other new officers are **Dr. G. M. Gibbs,** vice-president; **Dr. Herbert J. Tjaden,** secretary; and **Dr. Wilfredo Calderon,** treasurer. The delegates are **Drs. John Foss** and Dr. Saar, and the alternates **Drs. John Sulzbach** and **Forest Coulson.** All of them practice in Burlington.

Dr. M. R. Paragas was instrumental in getting a Shrine film on the treatment of burns for a showing in Creston on January 26.

On January 21, **Dr. D. F. Shaw,** of Britt, announced a series of six tetanus immunization clinics to be held at the Hancock County Memorial Hospital, for persons 15 or more years of age, and that the charge would be $1 for each of the series of three shots.

Dr. Ralph W. Beardsley, a physician who is one of a three member team to evaluate applications for disability or death compensation for the Veterans Administration in Des Moines, received a meritorious service citation from the President's Committee on Employment of the Handicapped, January 14. The presentation was made by **Governor Harold Hughes.** In 1959, a cerebral thrombosis deprived Dr. Beardsley of the use of his right arm and partially paralyzed his right leg.

The Sioux County Medical Society presented a plaque to **Mrs. Willa B. Reininger,** January 13, when she retired after 26 years as director of the Social Welfare office in Orange City. The citation mentioned her "wholehearted cooperation" with the Society.

Dr. John W. Eckstein, a professor of internal medicine at the U. of I., was the guest speaker on February 2 at a "Heart Education" dinner meeting sponsored by the Shenandoah Altrusa Club, in Shenandoah on January 29. He had spoken on the same topic at a Kiwanis meeting at Washington, Iowa, on January 26.

Dr. J. L. Flood, of Denison, will serve as president of the medical staff of the Crawford County Memorial Hospital for 1966. **Dr. M. U. Broers,** of Schlewig, is vice-president, and **Dr. J. M. Hennessey,** of Manilla, secretary-treasurer.

Dr. Richard E. Donahue, who has practiced in Centerville for two years, left there on January 24 for San Diego and Navy duty, with the rank of commander. He has had 10 years' previous service with the Navy.

The 1966 officers of the Davis County Hospital are **Dr. John R. Scheibe,** president; **Dr. E. O. Gilfillan,** vice-president; **Dr. Richard Schoonover,** secretary; and **Dr. Charles D. Fenton,** exceutive committee member. All of them practice in Bloomfield.

An item in the LEMARS SENTINEL for January 24 reported that **Dr. L. K. Yates,** of Hawarden, has announced his intention to move to Rock Valley within the next few months.

The Poweshiek County Medical Society has proposed a reorganization of the two hospitals in Grinnell to avoid duplication of services. Specifically, it suggests that obstetrics, surgery, fracture and emergency room facilities be provided in one hospital, and care for medical, convalescent and domiciliary patients in the other.

Dr. Warren Burk, who joined the staff of the Glenwood State School on July 12 of last year, has been made clinical director of outpatient services there.

New officers of the medical staff at the Guthrie County Hospital are **Dr. C. A. Nicoll,** of Panora, chief of staff; **Dr. Herbert Neff,** Guthrie Center,

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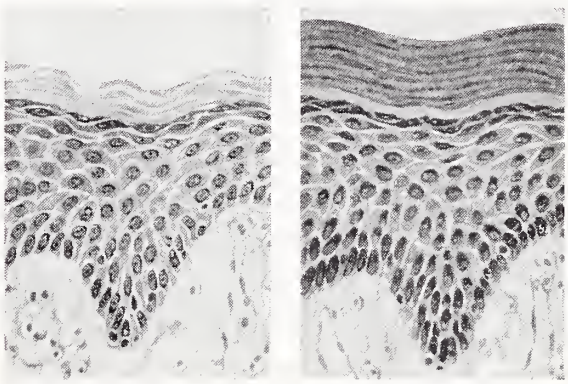

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SUPPLIED: Bottles of 28 and 100 coated tablets. *Also available:* Oxsoralen Lotion when the natural botanical is preferred.

References: (1) Becker, Jr., S. W.: J.A.M.A. 173: 1483-1485, 1960; (2) Pathak, M. A., and Fitzpatrick, T. B.: J. Investig. Dermat. 32:509-518, 1959; (3) Pathak, M. A., Feilman, J. H., and Kaufman, K. D.: 33:165-183, 1960.

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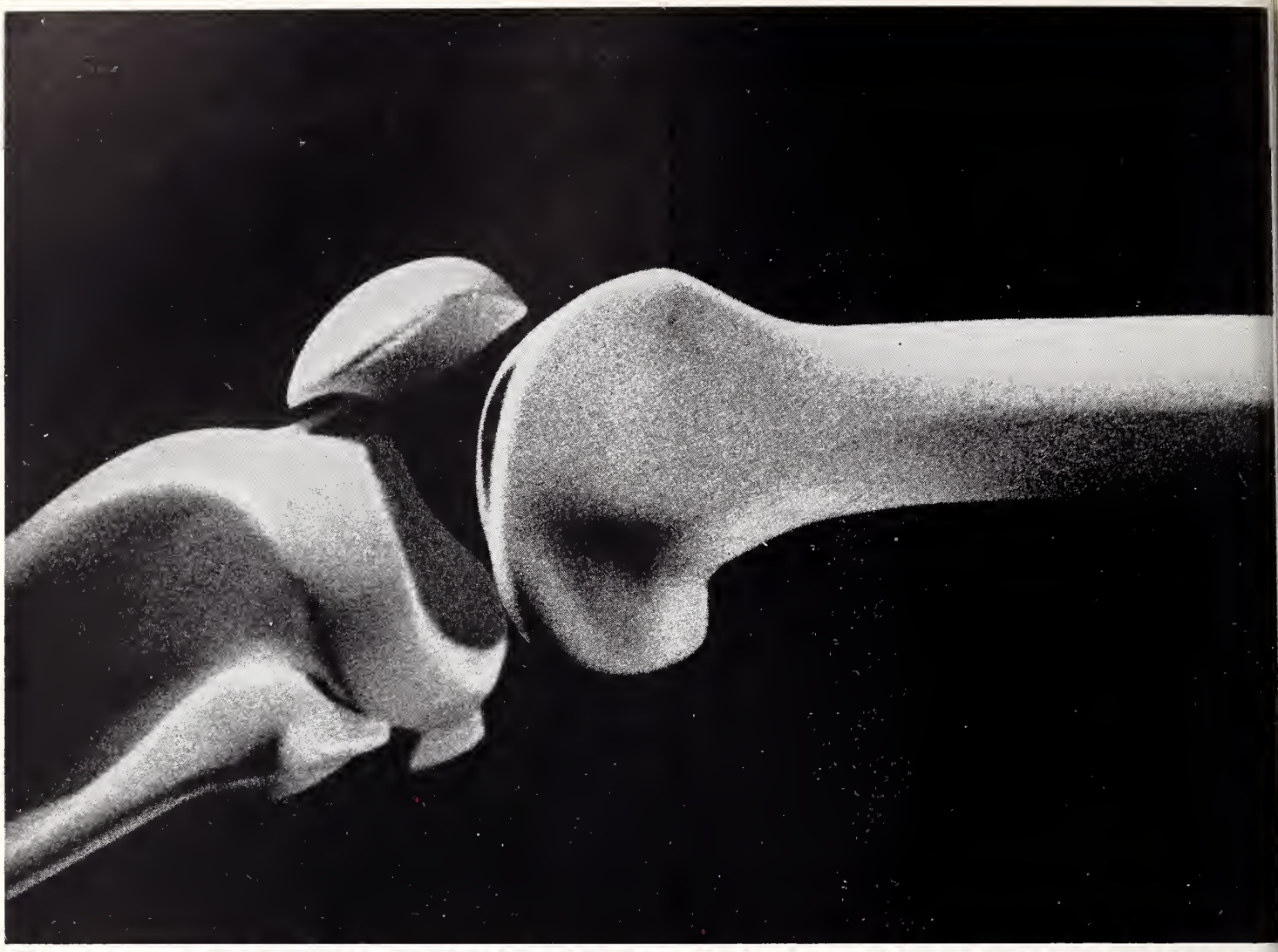

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Precautions
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If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequent

Dosage
The initial daily dosage in adults is 300-60 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be d creased to the minimum effective level: thi should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily

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vice-president and **Dr. R. J. Peterson,** Panora, secretary.

Dr. Carroll B. Larson, head of orthopedic surgery at the U. of I. College of Medicine, was installed as president of the American Academy of Orthopedic Surgeons on January 26. Earlier, he had been treasurer of the organization.

Dr. E. J. Cole, of Woodbine, who retired in 1944 after practicing medicine there for 55 years, celebrated his 101st birthday on January 24. He has been unable to leave his home for the past 11 years.

At a recent meeting of the Dallas-Guthrie Medical Society, in Dexter, **Dr. W. C. Wildberger** and **Dr. Robert Deranleau,** of Perry, and **Dr. William Seidler,** of Jamaica, were appointed to a committee that will promote the establishment of a mental health center for the area.

Dr. Johann L. Ehrenhaft, head of chest surgery at the U. of I. College of Medicine, discussed heart-valve operations on February 1 at the Scott County Medical Society's meeting in Davenport.

Drs. L. C. O'Toole and **Wendell L. Downing** have resumed practice after recuperating from operations. They are two of the four physicians at the LeMars Clinic, and there are two other doctors of medicine in the town.

Dr. Roger Westerlund, of Ames, and **Dr. M. G. Ericcson,** of Cedar Falls, addressed women's clubs in their respective communities late in January. Dr. Westerlund spoke on artificial respiration, and Dr. Ericcson discussed medical missionary work in the Congo and showed pictures that he had taken there.

At the meeting of the Johnson County Medical Society, in Iowa City on February 2, **Mr. Earl E. Stewart,** associate professor of planning at the U. of I., spoke on "Federally Aided Urban Renewal."

Dr. Harold Margulies, a former Des Moines physician, is one of two doctors who has been appointed by **President Johnson** to help the government of Pakistan improve medical training in that country. Dr. Margulies lived in Pakistan for four years helping medical schools that were beneficiaries of a U. S. aid program, and subsequently he spent a year as medical-school adviser in the Middle East for the World Health Organization. Most recently he has been living in Washington, D. C.

Dr. Robert K. Patterson, of Conrad, and **Dr. J. E. Rose,** of Grundy Center, were among the panelists at a joint meeting of clergymen and physicians held at the Grundy County Memorial Hospital on January 10.

On April 1, **Dr. Thomas C. White** will join **Drs. Kirk Strong, Robert A. Ryan,** and **Gene E. Egli** in practice in Fairfield. Dr. White is a 1960 graduate of the Creighton University medical school, and has been located in Chariton, his boyhood home town, since 1961.

Dr. Willard A. Krehl, a research assistant professor of internal medicine at the U. of I. College of Medicine, has been selected to serve a one-year term on the executive committee of the American Heart Association.

On January 26, **Dr. D. K. Benge** was named president of the Hampton Rotary Club. He and the other new officers will take over their responsibilities on July 1.

On January 21, **Dr. A. J. Gantz** appeared before the Board of Trustees of the Adair County Hos-

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pital, in Greenfield, to ask that enlargement of the laboratory and x-ray facilities at the institution be postponed until after July 1. It is his opinion that Medicare will increase the hospital's bed requirements, and that money can be saved if the necessary enlargements are contracted for simultaneously. The architects agreed with him.

Dr. Kazem Fathie, a Cedar Rapids neurologic surgeon, has moved from 414 Guaranty Building to 205 Commerce Exchange Building.

Mercy Hospital, Iowa City, announced a $5,000,000 expansion and moderinzation program on February 1. Adding 140 beds will bring its capacity to 355. The existing rooms will be remodelled, along with the laboratories, and a new pediatrics unit and a surgery suite will be constructed. An $800,000 fund-raising drive will be undertaken.

Mrs. James E. Dyson, Sr., the wife of a pediatrician who practiced for many years in Des Moines, died on January 24 at their home in Phoenix. The Dysons moved there seven years ago.

At the January 26 meeting of the Buchanan County Medical Society, in Independence, and at the Wapello County Medical Society's meeting in Ottumwa on February 1, the speaker was **Dr. R. D. Liechty,** an assistant professor of surgery at the U. of I. College of Medicine. He related his experiences aboard *S. S. Hope,* in Ecuador. The dentists and pharmacists of the area were guests at the latter meeting.

Dr. Robert H. Maillard has been appointed to fill out the unexpired term of **Dr. Russell R. Hansen** as Buena Vista County medical examiner, following Dr. Hansen's resignation. Both of them practice in Storm Lake.

At the February 16 meeting of the Polk County Medical Society, held at Holiday Inn, North, Des Moines, members of the Polk County Pharmaceutical Association were present. The speaker was **George R. Hazel, M.D.,** vice-president and medical

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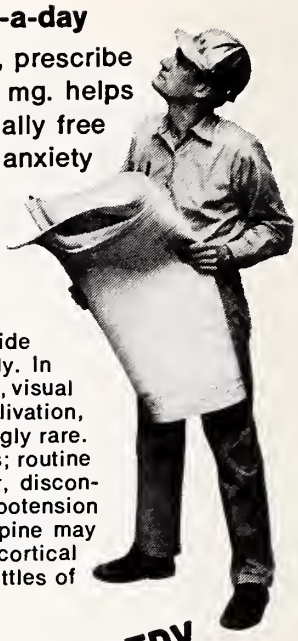

Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

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officer of Abbott Laboratories, North Chicago, Illinois. Dr. Hazel's topic was "Drug Research in a Climate of Change."

Recent and coming speakers on the Polk County Medical Society's radio program "Ask the Expert," broadcast over WHO, Des Moines at 3:00 each Monday afternoon, are **Dr. Byron M. Merkel,** an otolaryngologist, February 21; **Dr. Clifford W. Losh,** a urologist, February 28; **Dr. Louis L. Mahrer,** a radiologist, March 7; and **Dr. Joel D. Teigland,** an allergist, March 14. On a panel program telecast by the Des Moines Public Schools station KDPS-TV, from 9 to 10 p.m. on Thursday, March 10, **Drs. Sidney Sands** and **Charles D. Hintz,** psychiatrists, and **Dr. Paul F. Tempel,** a psychiatry resident, will discuss "Why Youth Explodes."

The AMA and the Sears Roebuck Foundation have published a revised and updated "Planning Guide for Physicians' Medical Facilities." Orders for it should be sent to the Department of Health Education, AMA, 535 North Dearborn Street, Chicago 60610.

A $10,000 **Maurice H. Noun** Research Fund has been established in the Department of Dermatology at the U. of I. Dr. Noun is not an alumnus of the College of Medicine in Iowa City, for he took his M.D. degree at St. Louis University and his dermatology training in New York City, but he has presented $2,500 to the Department and will give the remainder over a three-or-four-year period.

Drs. G. W. Rowney and **E. J. Hagen,** of Sioux City, lost their associate **Dr. J. J. Hagen** to the Air Force, temporarily, on March 1. **Dr. J. D. Lutton,** of Laurel, Nebraska, is to rejoin them in their practice of obstetrics and gynecology.

Dr. Edward J. Hertko has recently been made a fellow of the American College of Physicians. He practices with **Drs. Herman J. Smith, Daniel A. Glomset, Charles H. Gutenkauf, Samuel J. Zoeckler** and **Wilfred L. Brunswick** at the Internal Medical Clinic, in Des Moines.

NURSING AND RETIREMENT-HOME ADMINISTRATION, a book edited by two University of Iowa faculty members, will be published in March by the Iowa State University Press, Ames. Editors of the 304-page volume are **H. Lee Jacobs,** assistant professor

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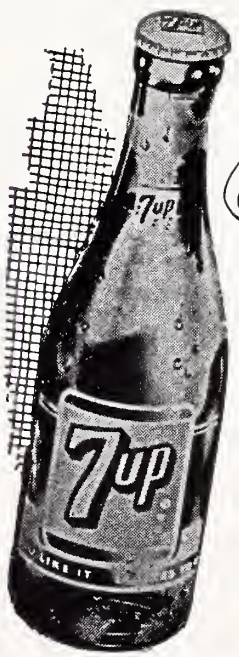

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of gerontology, and **Woodrow W. Morris,** director of the U. of I. Institute of Gerontology and associate dean of the College of Medicine. It is intended as a guide for students of gerontology and for administrators of nursing and retirement homes who are looking for ways to improve their facilities and services. Each chapter deals with a special facet of care of the elderly and has been written by a recognized expert in the field. Cooperating in publishing the book are the Institute, the State Department of Health, and the American and Iowa Nursing Home Associations.

Dr. Henry H. Gurau, an ophthalmologist, has moved his office from the Bankers Trust Building to 816 Des Moines Building, in Des Moines.

Dr. Richard A. Hastings, of Ottumwa, became a fellow of the American College of Radiology, at the organization's annual meeting in Chicago early in February. He is on the staffs of the Albia, Sigourney and Fairfield hospitals, as well as the one in Ottumwa.

James R. Fouts, professor of pharmacology in The University of Iowa College of Medicine, has been appointed a member of an international scientific group on Principles of Pre-Clinical Testing for Drug Safety, which is to meet in Geneva Switzerland, March 21-26. Sponsored by the World Health Organization, it will establish principles governing the testing of drugs for therapeutic safety. The sixteen members represent the United States, France, Great Britain, Switzerland, Austria, Germany, Czechoslovakia and Russia. Dr. Fouts, who will leave the United States March 10, will travel first to Portugal and Spain before going to Switzerland.

Paul Boeder, Ph.D., a professor of optics in the U. of I. Department of Ophthalmology, has been appointed a lecturer in ophthalmology at the University of Pennsylvania College of Medicine. He holds a similar appointment for short periods of teaching at Harvard University. Dr. Boeder received a master's degree in mathematics from the University of Pennsylvania and a Ph.D. in mathematics from the University of Gottingen, Germany.

Deaths

Dr. Morris Beddoes, 66, who practiced anesthesiology until five years ago at Waterloo, died on January 13, of a heart condition, in Carlsbad, Cali-

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fornia. He was semi-retired. Before locating in Waterloo, he had practiced in Independence, in Cascade and in Oelwein. Burial was at Independence.

Dr. Thomas F. Thornton, Sr., 79, a Life Member and a former president of the IMS died on January 23 at a Waterloo hospital, of complications following a fall at his home there. He was a graduate of the Creighton University medical school, and had practiced for 52 years.

Dr. Maude Estelle Taylor, 85, an Ottumwa physician for more than 50 years and a Life Member of the Iowa Medical Society, died on January 25 at the Ottumwa Hospital, where she had been a patient for three years. She took her M.D. degree at Iowa City in 1906, and quit practice in 1961.

Dr. Clyde B. Rogers, 89, who practiced medicine at Earlville for 68 years, died there on January 28. He was a Life Member of the Iowa Medical Society.

Dr. Richard Edward Sparks, 35, who had practiced at Lynnville since 1958, died at his home there on January 30.

Dr. Thomas J. McMahon, 90, died on January 30, in Clinton, where he had lived since his retirement in 1960. He held pharmacy and M.D. degrees from the University of Iowa, and had practiced at Garner, Victor, Iowa City, Lawler and Wyoming. He was a Life Member of the Iowa Medical Society.

Dr. Emerson B. Dawson, 65, who had engaged in general practice at Fort Dodge for many years, collapsed while on hospital rounds there, on February 2, and died within three hours. Death was attributed to the rupture of an abdominal blood vessel.

Population Expansion One of 6 Topics At 1966 AMA Annual Convention

Population expansion, a subject much discussed in both medical and lay circles, will be one of the six topics presented in general scientific sessions at this year's Annual Convention of the American Medical Association.

The Convention is to be held in Chicago June 26-30; the Scientific Program will be at McCormick Place, and the House of Delegates will convene at the Palmer House.

Scientific Sections of the AMA Council on Postgraduate Programs taking part in the General Meeting on population expansion will be Preventive Medicine, General Practice, Internal Medicine, Obstetrics and Gynecology, and Pediatrics. The General Scientific Meetings are open to all physicians attending the Annual Convention.

Other General Scientific Meetings on this year's Annual Convention program will be on the subjects of: emphysema, burns, mysterious fevers, community hospital coronary care units, and headache.

In addition to the General Sessions, each of the 23 Scientific Sections will present scientific programs. Many of the Section programs will, as in past years, be joint meetings of two or more Sections and, in some instances, a specialty society.

Specialty societies joining AMA Sections will include:

—The American College of Chest Physicians, which will join the Section on Diseases of the Chest for an all-day program.

—The American College of Cardiology and the American Heart Association, which will join the Section on Internal Medicine in a half-day session.

—The American College of Clinical Pathologists, which will join the Section on Pathology and Physiology in a half-day session on computers in medicine.

—The International Academy of Pathology, which will join the Section on Pathology and Physiology in a full-day program on tropical medicine.

—The Society for Investigative Dermatology, Inc., which will hold its meetings in conjunction with the Section on Dermatology.

—The Association for Research in Ophthalmology, Inc., which will meet in conjunction with the Section on Ophthalmology.

The AMA Committee on Blood and the Section of General Practice also will present a joint half-day program.

Brochure Designed to Recruit Blood Donors

Eight agencies have joined in fostering the volunteer blood donor concept by endorsing the newly released "Supply, Demand and Human Life" brochure developed by the American Association of Blood Banks' National Committee on Clearinghouse Program. They are the American Association of Blood Banks, the American Hospital Association, the AMA, the American National Red Cross, the Blue Cross Association, the Health Insurance Council, the National Association of Blue Shield Plans and the USPHS.

The need for cooperative effort was demonstrated by the shortage of blood in New York City that resulted from the impossibility of making normal collections during the transit strike. Blood had to be imported from throughout the country.

Mrs. Bernice M. Hemphill, of San Francisco, treasurer of the National Committee, says the brochure uses a personal approach in an effort to reawaken people to the importance of making voluntary blood contributions. To obtain copies, write to the Central Office, American Association of Blood Banks, Suite 1322, 30 North Michigan Avenue, Chicago 60602.

Rejected Draftees' Health Referral Service

Fourteen hundred medically unqualified Selective Service registrants in Iowa have been interviewed by and have received health counseling in the program of the Iowa Health Referral Service since its establishment in August, 1965. Such help is provided on a voluntary basis and free of charge to all examinees who are found medically unqualified at the Armed Forces Examining and Entrance Station. Iowa Health Referral Service is a branch of the Iowa State Department of Health, and Walter B. Eidbo, M.D., is its director.

The percentage of medically unqualified examinees who have availed themselves of this help has risen rapidly. Whereas only 20 per cent took advantage of this help at the start of the program, 98 per cent of all recently disapproved examinees have done so.

All medically unqualified examinees are interviewed in the IHRS office at the examining station. Those who elect to avail themselves of the service are referred to private physicians of their choice (usually their family physicians) for medical counseling and consultation regarding their disqualifying conditions and what can be done to treat them. IHRS pays for the consultation visit with the private physician in each instance.

A study of 591 consecutive cases reveals that the conditions for which examinees have been found medically unqualified for military service include a wide variety of entities involving all systems of the body. It is interesting to note that 120 were rejected for obesity and 15 for being too thin. One hundred twenty-eight had orthopedic conditions such as internal derangement of the knees, back conditions, recurrently dislocating shoulders, or any of a variety of other conditions involving the bones. Nineteen were suffering from peptic ulcers, and 28 had inguinal hernias. Forty-seven had high blood pressure, and another 25 had other cardiovascular diseases. EENT conditions had caused 96 to be disqualified. Genitourinary conditions accounted for 64 disqualifications. Forty-five had asthma, and 22 had dermatologic conditions.

Many of those counseled and consulted by their respective physicians have already had their conditions remedied, or are now under treatment.

Summer Camp for Diabetic Children

The Summer Camp for Diabetic Children of the Diabetes Association of Greater Chicago will be conducted, for the eighteenth year, from July 17 through August 7, 1966, at Holiday Home, Lake Geneva, Wisconsin. Boys and girls from eight to 14 years of age are eligible.

As in previous years, the camp will be staffed by resident physicians, a nurse, two dietitians and a laboratory technician, in addition to the regular counseling and domestic staffs of Holiday Home. Rates are arranged to suit the individual economic circumstances of the campers.

Inquiries should be addressed to the Diabetes Association of Greater Chicago, 620 North Michigan Avenue, Chicago 60611. The telephone number is 312-787-8842.

Pre-Exposure Rabies Immunizations for High-Risk Groups

Use of duck-embryo killed-virus rabies vaccine for pre-exposure immunizations of "high-risk" groups has been approved by the National Institutes of Health. Its duck-embryo origin is thought greatly to reduce the serious problem of isoallergic encephalomyelitis and neuroparalytic reactions associated with the pasteur-type vaccines made from rabbit or other brain tissue, and in addition, the antibody response to it is faster.

Two dosage schedules have been recommended, and they appear to be equally effective. In the first, three injections of 1 ml. each are given at intervals of one week, and the fourth is given between five and six months later. The second regimen calls for a series of three subcutaneous injections of 1 ml. each, the first two of which are given one month apart and the third seven months later. Experimental data indicate that over 80 per cent of immunized individuals have sufficient protection against rabies within one month after completing either dosage schedule. A single booster injection of 1 ml. is recommended every one or two years. Following a mild exposure to rabies, a previously immunized patient should be given a single 1 ml. dose of the vaccine, but if he has been severely exposed, the complete post-exposure 14-dose immunization procedure is recommended.

The precautions governing the use of other duck-embryo killed-virus vaccines apply to this one.

Grant to Marycrest College School of Nursing

A grant of $41,632 to Marycrest College School of Nursing, Davenport, was one of a dozen announced by the USPHS surgeon general on January 28, under the authority of the Nurse Training Act of 1964.

The Marycrest grant—third smallest of the 12—is for a two-year team-teaching program in medical-surgical nursing, in which "a master teacher and junior instructors" will be utilized.

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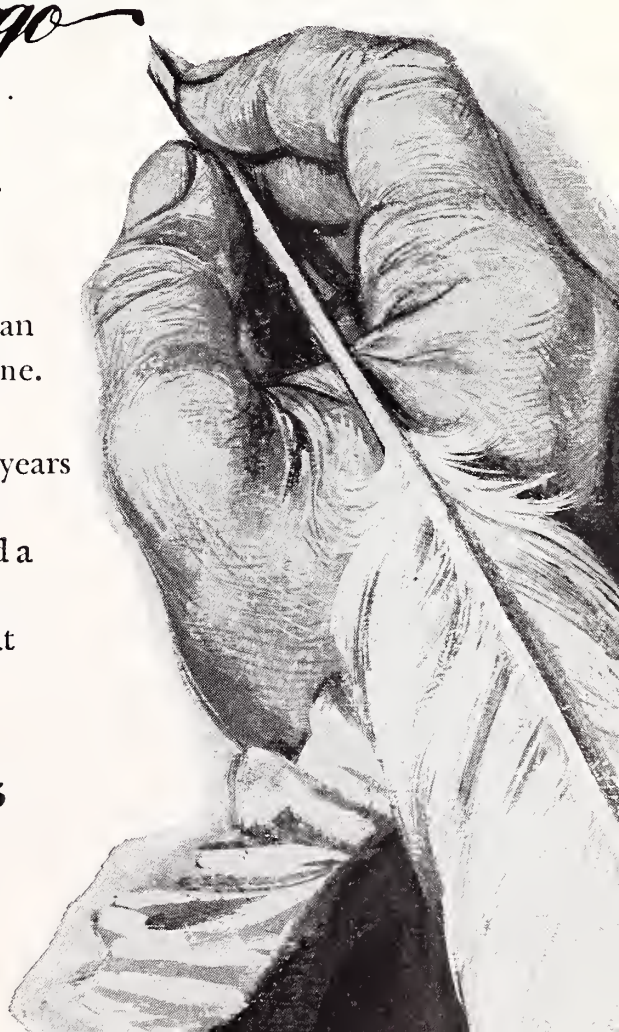

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Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossit stomatitis, proctitis, nausea, diarrhea, vagini and dermatitis. If adverse reaction or idiosy cracy occurs, discontinue medication and ins tute appropriate therapy. Anaphylactoid re tions have been reported.

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- Parathyroid Crisis—Don E. Boyle, M.D., and Edward E. Mason, M.D.
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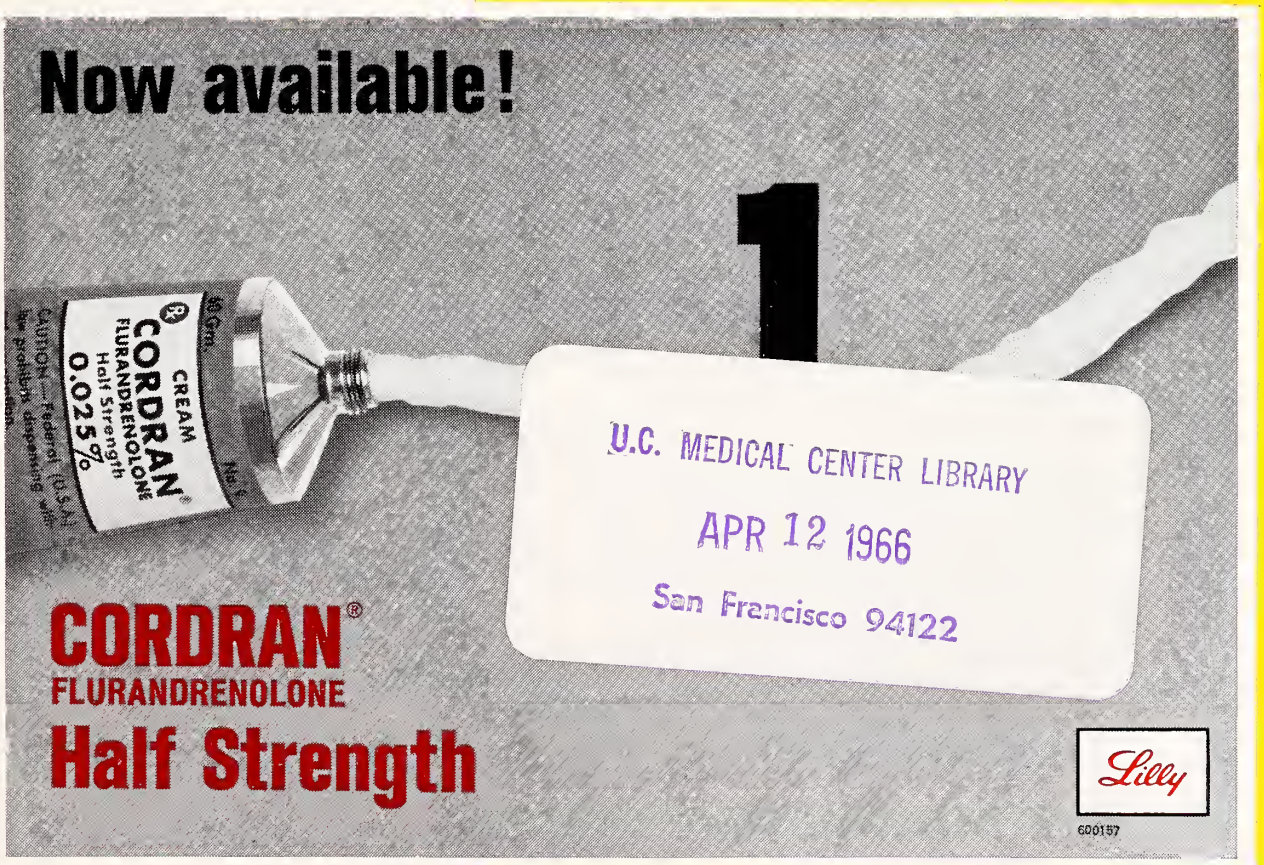

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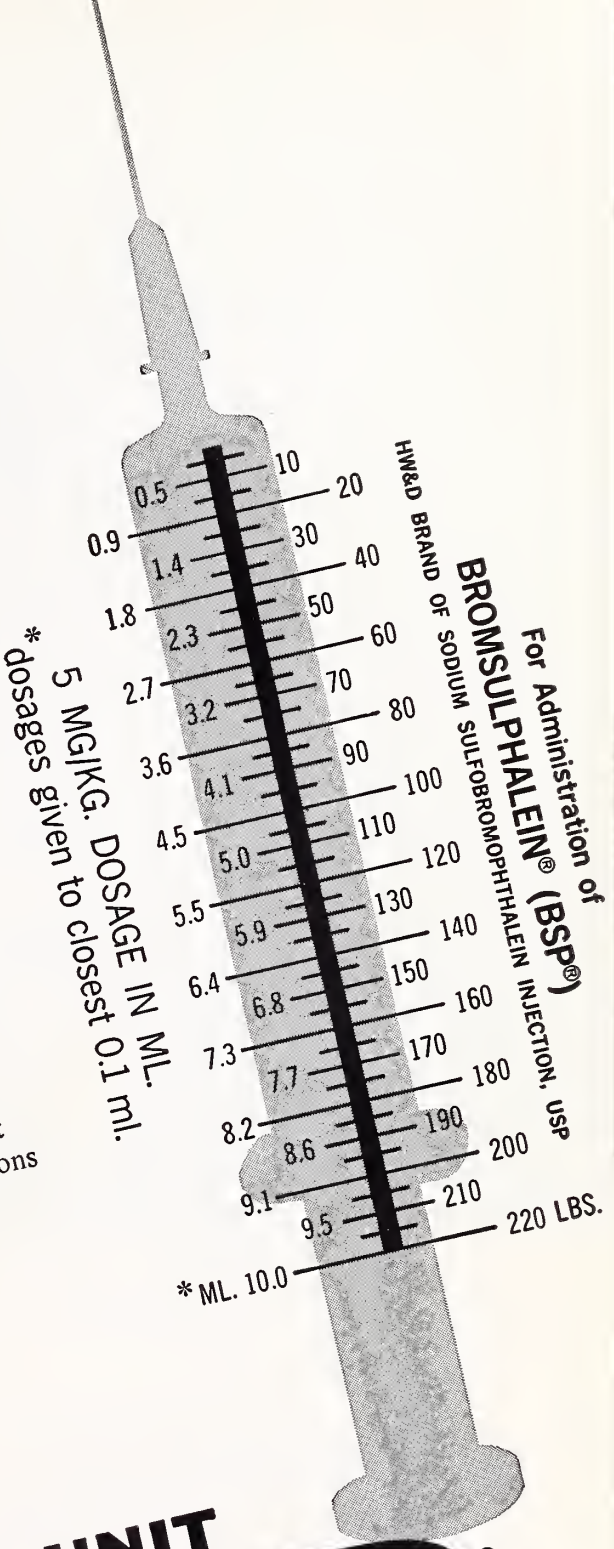

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1. Collective studies, Department of Medical Research, Winthrop Laboratories.

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The Month in Washington

Washington, D. C.—The Department of Health, Education and Welfare has issued strict guidelines prohibiting racial segregation in hospitals receiving money from the federal government. The Department said, in a policy statement, that schools, hospitals and nursing homes must adhere to the guidelines under the Civil Rights Act of 1964, if they are to continue receiving federal funds. Surgeon General William H. Stewart of the Public Health Service said more than 10,000 hospitals receiving federal funds had been sent new rules and compliance reports. He said such hospitals must not separate or discriminate on the basis of race or national origin in the care and treatment of patients.

Hospitals are being asked "whether patients are assigned to all rooms and facilities without regard to race, color, or national origin; whether all persons are allowed to use entrances, admission offices, waiting rooms, dining areas and cafeterias, toilets and lavatories, and other service facilities; whether the hospital accepts and approves applications for staff privileges and training without regard to race, color, or national origin; and other similar questions," according to the HEW statement. "An up-to-date patient census by race must be included in each response to the questionnaire, as must a breakdown by race of physicians holding staff privileges.

"If evidence of discriminatory practice is indicated in the returned questionnaire, the specific areas of failure to comply will be pointed out. The hospital will then be given an opportunity to eliminate its discriminatory practices as quickly as possible. Where discrimination persists, the hospital will be excluded from any new federal assistance programs, such as Health Insurance for the Aged (Medicare), which begins on July 1. When negotiations fail to achieve compliance, steps will be taken to terminate present assistance, or compliance will be secured through enforcement by the courts.

For administrative purposes, the Office of Equal Health Opportunity is located in the Office of the Surgeon General, and it will be headed by Mr. Robert M. Nash. It will employ a staff with special competencies and responsibilities in review and investigation of complaints, in the evaluation of complaint and compliance reports, in public-information activities, in fiscal and statistical analysis, compliance negotiations, and in the development of recommendations for corrective action within the law. The staff will include experts in such areas as law, contracts, professional education and project grants, hospitals and nursing homes, and state and local health agencies.

An Office of Equal Health Opportunity has been set up by the PHS to monitor compliance with the Civil Rights law on behalf of all federal agencies in the health and medical fields. "The Public Health Service intends to exert every effort to see that discrimination with respect to race, color or national origin is halted in all health and medical institutions and agencies receiving federal assistance," Dr. Stewart said.

* * *

The American Medical Association supports a legislative proposal for the federal licensing of dealers in research cats and dogs, to protect such pets from theft and to insure their humane care.

The AMA opposes licensing of research laboratories themselves, and sees no need to include other research animals in such a federal program. In a statement submitted to the House Agriculture Committee when it was considering such legislation, the AMA said: ". . . We firmly agree that any improper practices which do exist in the procurement of experimental animals should be corrected. . . .

"The AMA supports the purposes of the provisions of the bill which afford protection to owners of cats and dogs from the practice of pet stealing," the AMA statement said. "The Association urges, however, that the provisions with respect to the licensing of research facilities (and the setting of standards), be deleted. We further urge that the bill be restricted to cats and dogs, and not include other vertebrate animals."

The AMA said there is no need for the government to supervise laboratories because "the standards of animal care in research facilities in the United States are generally high," and voluntary efforts "are effectively accomplishing the goal of maintaining good animal care in the laboratory."

As for protecting research mice, rats, guinea pigs, etc., from theft, the AMA pointed out that they rarely are pets and, with few exceptions, they are obtained from a few national breeding laboratories which supply genetically pure inbred strains.

* * *

The Veterans Administration is planning a three-state test of a simplified method of administering its so-called "home town" program, under which eligible veterans are treated by local physicians on a fee-for-service basis. Alabama, Indiana and

the sedentary life is often the seat of low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

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Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

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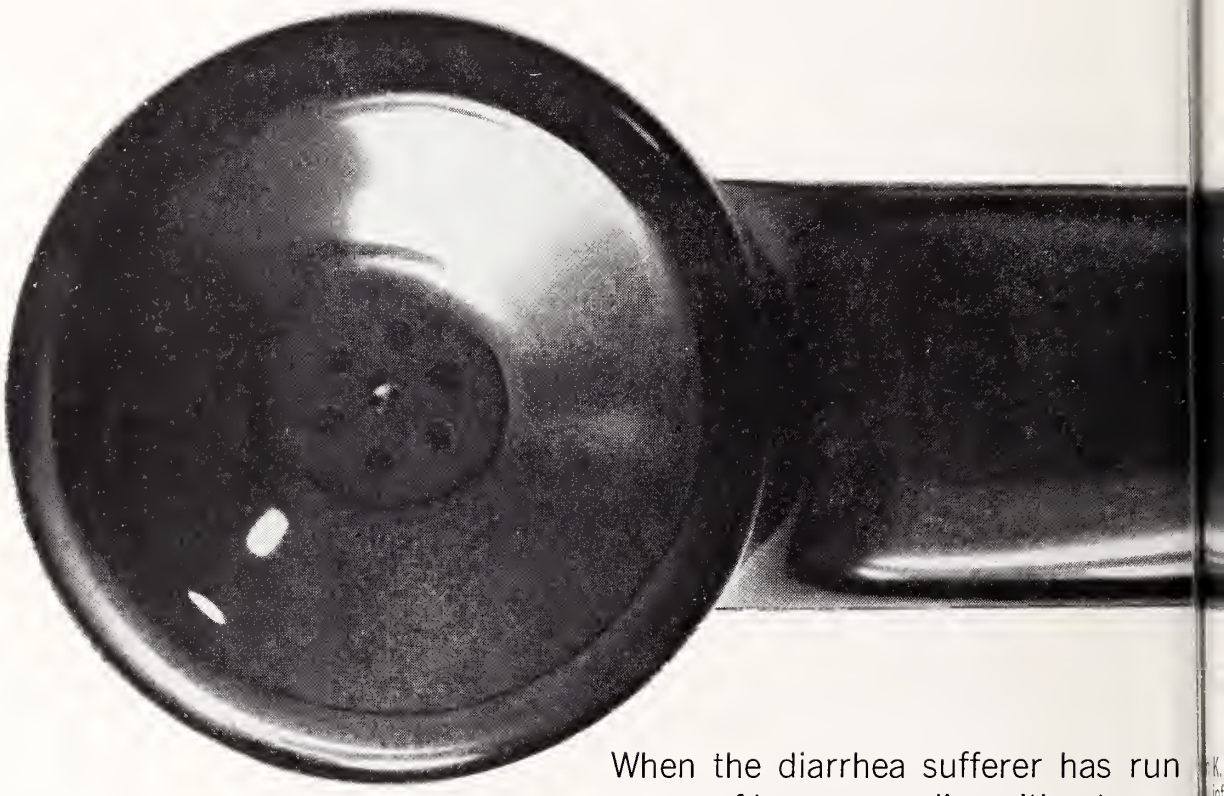

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K. Neomycin: Patient should be observed for infections due to bacteria or fungi. *Side Effects:* fonamide: Sensitivity reactions may occur (e.g., rashes, anemia, polyneuritis, fever; agranulosis with a fatal outcome has been reported). duction of thiamine output in the feces and of min K synthesis has been observed. Neomycin: usea, loose stools possible.

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Colorado were selected for pilot programs beginning next July 1. VA officials are hopeful that they will prove so successful in four or five months that the simplified method can be used nationwide.

Under the experimental program, each veteran entitled to treatment on a fee basis will receive an identification card stating the conditions for which he may be treated. Veterans then may seek treatment when they need it from doctors of their individual choice. Doctors will treat the patient to the extent they believe necessary and will bill the VA for "customary and usual" fees. Physicians will be asked to submit medical reports only when there has been a significant change in a veteran's service-connected condition. A schedule of maximum fees will be maintained confidentially, by agreement with the state medical society, and fees in excess of the maximum will be reduced. If the cost of continuous treatment is expected to exceed $30.00 per month, prior authorization from the VA will be required.

* * *

President Johnson is seeking Congressional approval for a $1 billion expansion of federal domestic health programs. In a domestic health message to Congress, he estimated that after the expansion, such programs would cost the federal government $4.67 billion in the 1967 fiscal year beginning next July 1. In additions, Medicare expenditures of Social Security tax funds are estimated at more than $3 billion for the year.

Mr. Johnson announced plans for:

—reorganization of health functions of the Department of Health, Education and Welfare.

—federal grants "to enable states and communities to plan the better use of manpower, facilities, and financial resources for comprehensive health services."

—programs to strengthen the nation's system of health care.

—a three-year program of federal aid in training of more health workers.

—an increase in medical research.

—additional steps to meet specific health problems such as alcoholism, birth control, mental retardation and nutrition.

The President also said that in fiscal 1968 he wants to start "new state formula grants for comprehensive health services," and additional grants to states, communities and hospitals to meet special health problems.

"To strengthen the nation's system of health care, the President proposed federal aid in modernizing obsolete hospitals, aid to group-practice clinics, and research and demonstration projects "in the organization, financing, utilization and delivery of health services."

But the program to provide government financing for group-practice medical and dental centers ran into trouble in its first congressional test this year. Mr. Wilbur J. Cohen, assistant HEW secretary, acknowledged under sharp questioning before a House Housing Subcommittee that no figures are available—since 1959—on how many group-practice clinics have been financed through regular bank loans. He testified that in 1946 there were 400 clinics for group practice, and that there are "nearly 2,000" now, based on a projection of 1959 figures.

President Johnson announced that HEW Secretary John W. Gardner had been directed to:

"—appoint an Advisory Committee on Alcoholism;

"—establish, in the Public Health Service, a center for research on the cause, prevention, control and treatment of alcoholism;

"—develop an education program in order to foster public understanding based on scientific fact;

"—work with public and private agencies on the state and local levels to include this disease in comprehensive health programs."

The President said administration plans call for "a sizable increase" in expenditures for birth control research, training and services by the National Institute of Child Health and Human Development, by HEW's Children Bureau, and by the Office of Economic Opportunity (poverty program).

Physicians' Responsibility to Nurses To Be Discussed at AMA Annual Convention

"The Responsibility of the Physician to the Registered Nurse" will be discussed in Chicago, on June 27, during the 115th Annual Convention of the American Medical Association. The afternoon session, sponsored by the AMA Committee on Nursing, will be held in Room 11 of McCormick Place as a part of the Convention's scientific program.

Donald B. Effler, M.D., a thoracic and cardiovascular surgeon at the Cleveland Clinic, and Jo Eleanor Elliott, R.N., president of the American Nurses' Association, and director of nursing programs, Western Interstate Commission for Higher Education, University of Colorado, Boulder, will each present a formal paper on the subject.

Following the presentations, the moderator, John J. Conger, Ph.D., dean of the University of Colorado Medical Center, Denver, will encourage an interchange of ideas between the two speakers, as well as audience participation. Introductory and concluding remarks will be made by W. Benson Harer, M.D., of Upper Darby, Pennsylvania, chairman of the sponsoring Committee.

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Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

A. H. ROBINS COMPANY, INC., RICHMOND, VA.

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Coming Meetings

IN STATE

Apr. 1-2 — **Second Annual Postgraduate Conference, Trauma of the Head and Neck,** Department of Otolaryngology and Maxillofacial Surgery, University of Iowa College of Medicine, Iowa City.

Apr. 7-8 — **10th Annual Raymond Blank Hospital Pediatric Conference,** Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.

Apr. 23 — **Fifth Annual Orthopaedic and Rehabilitation Seminar,** Younker Memorial Rehabilitation Center, Des Moines.

Apr. 24-27 — **Annual Meeting, Iowa Medical Society,** Savery and Fort Des Moines Hotels, Des Moines.

Apr. 25 — **Annual Meeting, Iowa Society of Anesthesiologists,** Vic's Tally-Ho Restaurant, Des Moines.

Apr. 29-30 — **Postgraduate Conference, Cleft Palate,** University of Iowa College of Medicine, Iowa City.

May 5 — **Lilly Seminar,** Denison Country Club, Denison.

May 20 — **Psychiatry for the General Practitioner,** University of Iowa Department of Psychiatry, Iowa City.

CONTINENTAL U. S.

Apr. 1-2 — **Joint Manipulations in Perspective, University of California,** San Francisco.

Apr. 1-2 — **Contrast Media in Abdominal Disease: A Program for the Practicing Physician, University of California,** San Francisco.

Apr. 4-5 — **Third Annual AMA Congress on Environmental Health Problems,** Drake Hotel, Chicago.

Apr. 4-6 — **Biomedical Communication: Problems and Resources, New York Academy of Sciences and the Public Health Service Audiovisual Facility,** Waldorf-Astoria Hotel, New York City.

Apr. 4-7 — **Symposium on Trauma, Committee on Injuries, American Academy of Orthopaedic Surgeons,** Olympic Hotel, Seattle.

Apr. 4-8 — **Mental Retardation Institute, University of Southern California,** Los Angeles.

Apr. 4-8 — **Recent Advances in Gastroenterology and Gastrointestinal Pathology, University of Colorado School of Medicine,** Denver.

Apr. 4-8 — **39th Annual Spring Congress in Ophthalmology and Otolaryngology, The Gill Memorial Eye, Ear and Throat Hospital,** Roanoke, Virginia.

Apr. 4-8 — **Workshop in Teratology, The University of Colorado,** Boulder.

Apr. 6 — **Sports Injuries, UCLA,** Los Angeles.

Apr. 11-13 — **Cine-Angiographic Techniques in Cardiovascular Diseases, American College of Chest Physicians,** Cleveland Clinic, Cleveland.

Apr. 12-15 — **18th Annual Postgraduate Seminar, Illinois Academy of General Practice,** Sherman Hotel, Chicago.

Apr. 14-16 — **Current Concepts of Renal, Gastrointestinal and Circulation Physiology, American College of Physicians,** Barbizon-Plaza Hotel Theatre, New York City.

Apr. 16-17 — **The Uncertain Quest: The Teen-Ager's World, University of California,** San Francisco.

Apr. 18-22 — **47th Annual Meeting of the American College of Physicians,** Americana and New York Hilton Hotels, New York City.

Apr. 20-23 — **Tenth Annual Postgraduate Course in Fractures and Other Trauma, Chicago Committee on Trauma of the American College of Physicians,** John B. Murphy Memorial Auditorium, Chicago.

Apr. 23 — **Postgraduate Course on Sex Education in the Schools, University of Colorado School of Medicine,** Denver.

Apr. 23-24 — **Neuropsychiatry for the Non-Psychiatric Physician in General Practice, University of California, San Francisco,** at Sutter Memorial Hospital, Sacramento.

Apr. 25-27 — **Annual Meeting, Council on Medical Television, University of California,** San Francisco.

Apr. 25-27 — **Annual Spring Session, American Academy of Pediatrics,** Queen Elizabeth Hotel, Montreal, Canada.

Apr. 25-28 — **1966 American Industrial Health Conference,** Sheraton-Cadillac Hotel, Detroit.

Apr. 27-29 — **Symposium "Selected Aspects of Cutaneous Precancers, Cancers and Pseudocancers," Department of Dermatology, New York University Medical Center,** New York.

Apr. 27-30 — **16th Hahnemann Symposium, Atherosclerotic Vascular Disease,** Marriott Motor Hotel, Philadelphia.

Apr. 28-29 — **General Surgery, University of California,** San Francisco.

Apr. 28-29 — **Symposium on Hypertension, University of Southern California,** Los Angeles.

Apr. 28-30 — **Postgraduate Course on Clinical Dermatology, University of Colorado School of Medicine,** Denver.

Apr. 28-30 — **Third Annual Midwest Conference on Anesthesiology, Illinois Society of Anesthesiologists,** Continental Plaza Hotel, Chicago.

Apr. 30-May 5 — **15th Anniversary Clinical Meeting, American College of Obstetricians and Gynecologists,** The Palmer House, Chicago.

May 5-7 — **Ear, Nose, Throat,** University of California, San Francisco.

May 5-7 — **13th Annual Meeting of the Mid-Central States Orthopaedic Society,** Cornhusker Hotel, Lincoln.

May 6-7 — **Obesity,** University of California, San Francisco.

May 6-7 — **Postgraduate Spring Seminar on Rheumatic Diseases, The Arthritis Foundation,** A. B. Dick Auditorium, Presbyterian-St. Luke's Hospital, Chicago.

May 7-8 — **Dynamic Measurements With Radioisotope Techniques for Evaluating Organ Function and Circulation,** UCLA.

May 9-11 — **1966 National Health Forum,** Americana Hotel, New York City.

May 11 — **1966 Scientific Session, American Cancer Society,** St. Francis Hotel, San Francisco.

May 12 — **17th Annual Dr. F. G. Thompson, Sr., Lectureship, "The Present Status of Organ Transplantation," to be given by Dr. George A. Hallenbeck,** Thompson, Brumm & Knepper Clinic, Clinic Building, St. Joseph, Missouri.

May 12-15 — **Annual Meeting, Hawaii Medical Association, Arthritis and Psychiatry,** Princess Kailuani Hotel, Honolulu.

(Continued on page 410)

n Fractures: B and C vitamins are therapy

Stress formula vitamins are a key factor in bone and tissue regeneration. To meet the increased metabolic demands, STRESSCAPS offers therapeutic amounts of B and C vitamins as an aid to smoother convalescence and earlier rehabilitation. In fractures, as in many other conditions of physiologic stress, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

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7283-4

The Great Society

In response to a request from Blue Cross for his Social Security number, a Des Moines physician who recently terminated his private practice and became head of health services for the Public Schools, replied approximately as follows:

For your information—

My Social Security number is 375-05-7681.

My Zip Code—so I am told—is 50311.

My medical license number is 10865.

My narcotics license number is Iowa 343, but now I am informed that I must use the identifying number 42 608-2508 on all federal correspondence.

My Blue Cross-Blue Shield numbers are Certif. No. 742934 Group 70002 Contract Codes DBE 8 BO.

My Navy file number is 0195592.

My Navy retirement pay comes under Symbol 5178, but my government insurance dividend is Symbol 3036.

My bank account number is 0713-0022-141399.

My salary check is issued under number 043014.

My Texaco Credit Card number is 35 521 81590.

My Cities Service Credit Card number is 242 250 736

My Hertz card number is 5524 L38.

My Younker charge account number is 1107-015 AZ.

My Sears number is 1 59066 009701.

My Marshall Field number is 127374-354.

My driver's license is number 1405327.

My car license is 77 4532. (Being an individualist, I was able to buy it early and get a low number.) The title number is 77 476681.

My AAA number is 5503-00611. If this keeps up, I shall also need an AA number.

If all of this fails to identify me, I am simply

E. Parish Lovejoy, M.D.

Health-Insurance Booklet for Patients

A new booklet has been published by the Health Insurance Institute to provide the public with a guide in analyzing hospital, surgical and other medical expense policies issued by insurance companies on an individual and family basis. Entitled "Your Health Insurance Check-Up," it describes the major forms of health insurance, explains key terms and provisions found in medical-expense policies, and features a check-list of questions for reviewing those provisions as they apply to a family's health protection.

It suggests that families and individuals check their policies for details on such benefits as private duty nursing, diagnostic X-ray and laboratory tests, mental and nervous disorders, dependency coverage, and maternity. It points out the importance of a family's knowing the effective date of its policy and what exclusions it may contain. The booklet also contains a description of the difference between "Non-Cancellable," "Guaranteed Renewable" and "Optionally Renewable" policies, and emphasizes the availability of disability income insurance to provide protection against loss of income resulting from illness or accident.

In addition to serving as a health insurance guide, the 10-page booklet contains a section which urges patients to be "good medical citizens" by consulting their physician promptly, following advice, discussing fees frankly, and making only necessary demands on their doctor for treatment and care.

The Institute is offering reasonable quantities of "Your Health Insurance Check-Up" without charge to state and county medical societies for distribution to member physicians. Requests may be addressed to Health Insurance Institute, 277 Park Avenue, New York City 10017.

A Novel Way to Raise Money for Medical Research

A novel proposal for parlaying 3 million of the U. S. Treasury's silver dollars into as much as $50 million for medical research is gaining support in Congress, according to a news story in the March 23 issue of the WALL STREET JOURNAL. A bill introduced by the chairman of the House Banking Committee, Representative Patman (D., Texas) would authorize the sale of the coins to the American Cancer Society and the American Heart Association at their face value. Those organizations then could sell the coins, a few at a time, to collectors at a very considerable profit.

The Treasury has ceased minting and distributing silver dollars, and most of its remaining stockpile consists of coins that were minted in Carson City, Nevada, in the nineteenth century. It is supposed that they are greatly valued by collectors.

Mrs. Charles W. Bailey, a director of the Texas Division of the American Cancer Society, was quoted as saying that the two organizations could realize a profit of between $35 and $50 million from the project, and the sale might be spread over five years so as to avoid glutting the collectors' market.

Unlike many other bills submitted to the House Banking Committee, this one has been warmly welcomed by Mr. Patman's colleagues. At a committee session on March 22 that representatives of the two health organizations attended, the lawmakers took turns making little speeches in support of the measure.

Chairman Patman said formal hearings on his bill will be held soon.

"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

now...introducing a new high-strength dosage

SIGNEM

A 'MAXIMUM SECURITY' ANTIBIOTIC*

* **THE BROAD RANGE DEPENDABILITY OF TETRACYCLINE**
long established as the broad-spectrum agent of first choice in a wide variety of infections

* **WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT**
triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline

* **ESPECIALLY VALUABLE IN U.R.I.**
provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered

* **NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY**
Signemycin 375—high-potency capsules for simpler administration, greater patient economy

YCIN® 375

(tetracycline 250 mg. triacetyloleandomycin 125 mg.)

Indications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug. Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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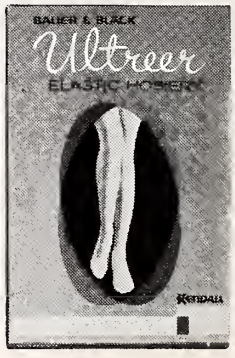
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-being®
New York, N.Y. 10017

You prescribe elastic stockings. She won't wear them. Now what?

Ultreer™

Elastic Stockings so sheer they look like support hose. Both Ultreer and support hose are sheer, shapely, cool and comfortable. But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. They provide the therapy you prescribe. The fashion and economy she demands.
Ultreer stockings have a new low price. So low, she can afford two pairs of Ultreer instead of one pair of regular elastic stockings. There'll be no disagreements there. Ultreer stockings are as comforting to her purse as they are to her legs. New Ultreer are the elastic stockings doctors and women can agree on.



KENDALL
BAUER & BLACK SUPPORTS DIVISION

Deaths

Dr. Philip M. Day, 79, a Life Member of the Iowa Medical Society, died on February 4 at the Camair Convalescent Home in Oskaloosa. He was a 1907 graduate of the Keokuk Medical School, and practiced 54 years, originally at Barnes City, and after returning from World War I, in Oskaloosa. He retired in 1962.

Dr. Jack V. Treynor, 68, died at a Council Bluffs hospital on February 5, following an extended illness. He was a medical graduate of the University of Iowa, and had practiced in Council Bluffs for 40 years.

Dr. Jesse C. Moore, 87, a 1905 graduate of the College of Medicine at Keokuk who practiced 50 years at Eldon, died on February 8 at the Lutheran Home for the Aged in Vinton. He was a Life Member of the Iowa Medical Society, and he moved to Vinton in 1963 to make his home near that of his son.

Dr. William E. Sanders, 95, who practiced at Alta from 1893 to 1908, and in Des Moines for 37 years thereafter, died on February 21 at his home in Tucson, Arizona, where he had lived since his retirement in 1954. He was a Life Member of the Iowa Medical Society.

Dr. Charles T. Bergen, 57, of Northwood, was killed near Hartsville, Tennessee, on February 27, when the car he was driving left a rain-slick blacktop road and plunged down a steep embankment into some trees. He had practiced in Northwood for 12 years, and before that in Hampton.

Dr. Ralph E. Gray, 76, died on March 2 at University Hospitals, Iowa City, following a heart attack on February 26. He formerly was a physician at the Iowa State Training School, and an Eldora councilman.

At the IMS Annual Meeting, attend the

MEDICAL/LEGAL SYMPOSIUM

2-5 p.m., Tuesday

and a social function for physicians and lawyers

5:00-5:45 p.m.

Hotel Fort Des Moines

Psychiatry for the General Practitioner

The Department of Psychiatry at the U. of I. College of Medicine is to present a program on Psychiatry for the General Practitioner, in the large classroom at the State Psychopathic Hospital, Iowa City, on Friday, May 20. The registration fee is $15, including a ticket for lunch, and the program is accredited for 6½ hours by the American Academy of General Practice. Doctors who wish overnight accommodations should register in advance.

8:30 a.m. REGISTRATION
8:40 a.m. WELCOME FROM THE DEPARTMENT OF PSYCHIATRY—Paul E. Huston, M.D.
8:45 a.m. PANEL ON MARITAL COUNSELING
John Clancy, M.B., B.Ch.
William S. Moeller, M.D.
Russell Noyes, M.D.
Douglas Johnson, M.D.
12:30 p.m. LUNCH—Doctors' Dining Room
2:00 p.m. "Diagnosis and Treatment of Depression"—Dr. Huston
2:30 p.m. "Psychological Aspects of Pregnancy"—Albert S. Norris, M.D.
3:00 p.m. GENERAL DISCUSSION OF DEPRESSION
4:15 p.m. "Management of Enuresis"—Richard L. Jenkins, M.D.
5:00 p.m. ADJOURNMENT

Future Postgraduate Courses at U. of I.

1966

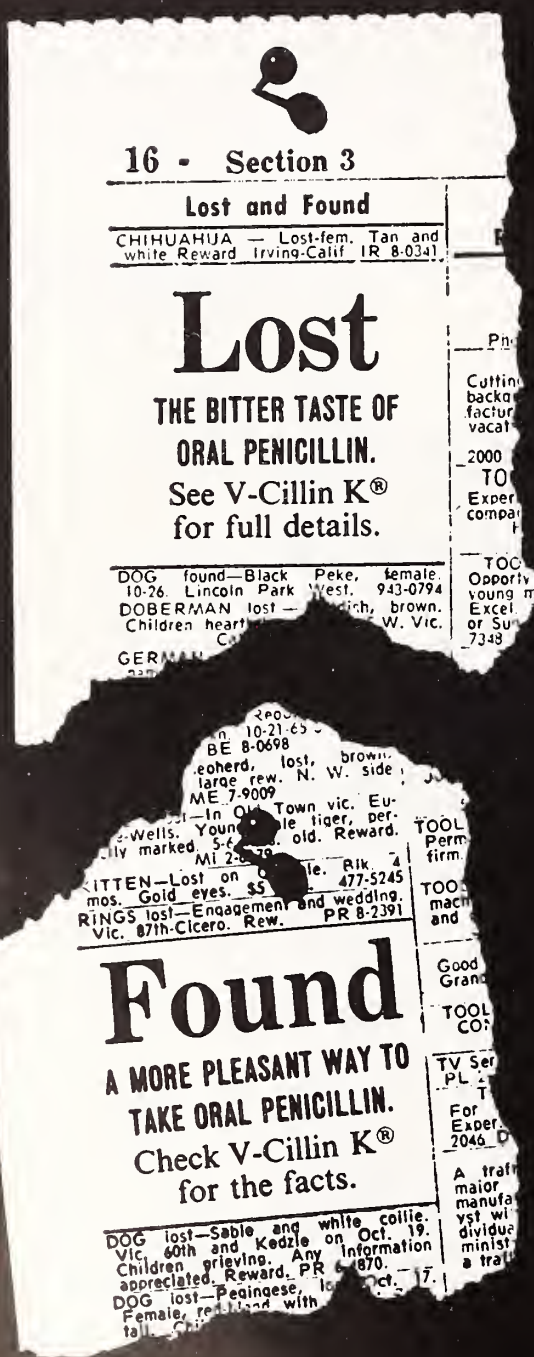
September 21-23	CARDIOLOGY
September 30	OTOLARYNGOLOGY FOR THE GENERAL PRACTITIONER
October 14	ANESTHESIA FOR NURSES
October 18-19	RELIGION AND MEDICINE
October 21-22	ORTHOPEDICS
November 1-2	SURGERY
November 8-9	NURSING INSTITUTE
November 18-19	PEDIATRICS-RADIOLOGY-UROLOGY
December 9-10	CARDIAC AND RESPIRATORY DISEASES

1967

January 17-18	OBSTETRICS AND GYNECOLOGY
February 14-17	REFRESHER COURSE FOR THE GENERAL PRACTITIONER
March 31	TRAUMA TO THE HEAD AND NECK
May 5-6	CLEFT PALATE—CLEFT LIP
May 23-24	SURGERY
June 19-23	AMERICAN COLLEGE OF PHYSICIANS

Information regarding the cosponsors, speakers, registration fees, etc. will be given in the detailed program which will be mailed approximately six weeks before each session.

Address any communications to: Director, Postgraduate Medical Studies, Office of the Dean, College of Medicine, Iowa City 52241.



Patients won't complain about bitter penicillin taste when you specify V-Cillin K. Here's why: It has a special coating, only one and a half *thousandths* of an inch thick. Because it is designed to dissolve after approximately six seconds, this barrier to bitterness remains on the tablet as it slides past the tongue. When the tablet reaches the stomach, however, the coating has dissolved, and the penicillin is ready for immediate absorption into the bloodstream.
Result? The proved efficacy of potassium penicillin V without the penalty of bitter taste.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

Lilly

V-Cillin K®
Potassium Phenoxymethyl Penicillin

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana.
600050

The American Heart Association in The Health Field Today

LEWIS E. JANUARY, M.D.
Iowa City

I APPRECIATE this opportunity to comment briefly on the role of the American Heart Association in the health field today.

The partnership of physicians and laymen which characterizes the American Heart Association is not unique, but perhaps it has been most effectively developed in Heart. One of the greatest assets the Heart Association has is its more than 30,000 physican and scientist members, 4,200 of whom are allied with the Scientific Councils as a national professional cardiologic society, with the objective of serving the interests of physicians in every appropriate way.

The record shows that the American Heart Association was in the vanguard, this past year, in the efforts which successfully changed the federal proposal for regional medical complexes from a gigantic medical-care bill to the Regional Medical Program Law which emphasizes training and experimentation instead. At least, the present legislation offers the possibility of exploration into ways to improve medical manpower and to use regional approaches in helping solve some of the problems of health care. Very importantly, this planning must arise at the community level, and the planning bodies must include practicing physicians. We are proud of the part we played in insuring non-federal participation in this planning for the regional programs.

Heart Associations have been acknowledged leaders in professional education. Here in Iowa, large numbers of physicians have availed themselves of the opportunity to participate in postgraduate courses and to read the superior professional journals. The American Heart Association's annual scientific session, each October, is the largest cardiovascular meeting in the world. New approaches to postgraduate medical education are being pioneered. The American Heart Association supports a limited number of fellowships and traineeships in health education and in more nearly clinical areas. Two new teaching scholarship awards were established this year to promote and encourage excellence in the teaching of cardiovascular disease. The many pamphlets for physicians and patients alike, written by outstanding authorities, have had wide acceptance and usefulness.

Physicians, above all others, understand the Heart Association's emphasis on medical research, and this remains its primary commitment. The heavy involvement of the federal government in medical research makes private support all the more important. This is true because the necessary financial restrictions and controls put upon government grants tend to promote conformity rather than to stimulate uninhibited imagination. Furthermore, government subsidies tend more and more toward block grants, institutional grants and regional centers, with the result that individual project support is becoming entirely dependent upon private sources of money. The American Heart Association believes that the more than 100 million dollar investment which Heart Associations have made in research since 1949 is paying off handsomely, and it has no intention of abdicating its support of cardiovascular research.

The American Heart Association steadfastly maintains another position which physicians understand better than most people do. I refer to its insistence on a course of independent action and

As guest editor of this issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY, *I wish to take this opportunity to call attention to a great honor which has been paid to the medical profession of Iowa. One of our members, Dr. Lewis E. January, has been elected president of the American Heart Association. All of us are familiar with the outstanding record of research, education and service which that society has provided to the American public.*

I have asked Dr. January to tell us more about the impact of the American Heart Association upon our professional lives.

—ROBERT E. HODGES, M.D.

Dr. L. E. January

fund-raising, as opposed to the regimentation and collectivism of the federated approach. It takes courage to withstand these pressures.

I am sure that the American Heart Association and its affiliates and chapters are making a contribution of inestimable value to the national health through meaningful research, public and professional enlightenment, sound community programs and emphasis on preventive medicine. Even closer ties between it and the medical profession are anticipated.

AAGP Moves to Have Pharmacists Label Drug Bottles

Doctors were urged to request pharmacists to label prescription drug containers with name and strength of contents in order to aid ready identification, especially in case of emergency. The action was taken by the American Academy of General Practice.

According to Dr. Edward J. Kowalewski, of Akron, Pennsylvania, chairman of the Academy's Commission on Environmental Medicine, the move is designed (1) to help prevent death in children or attempted suicides by enabling those finding them to identify immediately the drug taken and obtain the proper antidote; (2) to help persons changing doctors or moving from one place to another to help their new doctors identify the drugs they have been taking; (3) to advise patients with allergies as to prescription contents, so that they can identify drugs that previously have caused reactions, and (4) to prevent mixups between two or more drugs being taken concurrently or between drugs being taken by different members of a family.

Dr. Kowalewski said that the Academy concedes abuses, such as self-medication, drug shoping and others, would be possible under the labeling procedure. "However, we feel that the advantages, especially in emergency situations such as drug poisoning in children, far outweigh the potential drawbacks," he said. "And in our action we did stipulate 'under normal circumstances' to enable the doctor to control the situation when he knows he has a patient who might be harmed by such knowledge."

Dr. Kowalewski said that the Academy feels the patient has a right to know the nature of his illness and what is being prescribed for it. He added that today's patient usually is sophisticated enough about drugs and their dangers to use the knowledge wisely.

Iowa Thoracic Society

"What's New With Atypical Mycobacteria," "Mediastinoscopy," and "The Preoperative Evaluation of Patients With Pulmonary Disease" are papers to be presented respectively by John S. Chapman, M.D., assistant dean and professor of medicine at Southwestern Medical School, Dallas, Texas, and by Nicholas Rossi, M.D., and Khalil Feisal, M.D., of the University of Iowa College of Medicine, at Hotel Savery, on May 4, between 7:00 and 9:00 p.m., during the annual meeting and medical program of the Iowa Thoracic Society.

Mary Beth Dewey, M.D., Iowa City, president of the Iowa Thoracic Society, invites all Iowa physicians to attend the hospitality hour, dinner and medical program of the organization's seventeenth annual meeting.

The business meeting and election of officers and executive committee members, will be held from 4:00 to 5:30 p.m. The hospitality hour will follow the business meeting, and a smorgasbord dinner will be served at 6:15 p.m. Spouses are invited.

Dean Robert C. Hardin, of the College of Medicine, cordially invites all Iowa physicians (alumni and non-alumni) and their wives to attend a social hour during the annual meeting of the American Medical Association in Chicago, June 26-30. The Iowa social hour will be held Tuesday, June 29, from 4:00 to 6:30 p.m. in the Florentine Room of the Pick-Congress Hotel. This will be the third annual get-together at the AMA meeting.

A Tourist's Eye View of Medicine in Israel

WILLIAM B. BEAN, M.D.
Iowa City

"It is a melancholy of mine own, compounded of many simples, extracted from many objects, and indeed the sundry contemplation of my travels, which, by often rumination, wraps me in a most humorous sadness."—AS YOU LIKE IT, *Act IV, Sc. I.*

IN JUNE, 1965, there was a celebration in Jerusalem of the 40th birthday of the Hebrew University and the 20th birthday of the Hadassah Medical School. The occasion was framed in fitting ceremony by the dedication of the new University Medical School and Hospital Building. A small international symposium convened for a period of ten days or so near the end of June, at which about 25 medical scientists, teachers and guests from Great Britain, the United States, and both sides of Europe's iron curtain, as well as members of the local faculty, discussed their own work and ideas as they related to the impact of the science-and-knowledge-explosion-in-medicine upon the teaching of doctors in the future. There was more than a little emphasis on the teaching of medical teachers. Almost every talk dealt with the research that had been conducted by the person presenting the paper. A special lecture was devoted to the main theme of the conference, and the role of government in the support of medical research was considered for a whole day. Thus, the weight of the papers and the main movement of ideas in the symposium was diagnostic rather than therapeutic. The nature of the problems, rather than their solution, occupied much of our time.

This occasion for a visit to Israel, my first, gave me an opportunity to look closely at medical practice and teaching there. So with the infallible wizardry of a two-week visitor, I share my impressions with you. If most of you know as little about the ancient, recent, and current history of Palestine and Israel as I did—though I thought I knew a lot—a few brief words of orientation may be helpful. Israel's "War of Liberation," when it was halted by an armistice, left most of the ancient city of Jerusalem in Arab hands. It established arbitrary and topographically artificial boundaries between the new Israel and Jordan. Israeli Jerusalem occupies the apex of a narrow triangle approached by a road which is overlooked on both sides by Arab-held country. Two large salients of Jordanian land slant in north and south of the slim line connecting Jerusalem with Tel Aviv and the Mediterranean. The new Jerusalem in Israel is being carved out of formidable, barren, rocky hills, that in spots resemble the approaches to the top of Pike's Peak above the tree line, and many of the semi-arid portions of California and Colorado. The old walled city is almost entirely separated from the Jerusalem of the Israelis by barbed wire, sandbags, and the mutually guarded Mandelbaum gate. A small idiological oasis to which there is common access is King David's tomb, revered alike by Jew and Arab. There, all over again, are Checkpoint Charley and the Berlin wall. Later we saw the same thing in Nicosia, on Cyprus, where main streets separate sandbag barricades and coils of barbed wire, over which Turk and Greek glower at each other. We felt the hates of a multitude of hostile neighbors in this many-hating modern world. Later, at Beirut as a visiting lecturer, I was to spend 24 hours in the airport waiting room and then be turned away.

What one immediately senses about Israel is the tremendous drive, the dedication, and the surging —almost overpowering—industrious vigor of the people. They seem to enjoy working with twice the intensity and for twice as many hours as we do in this country. Their striving towards self-sufficiency is aided and abetted by the Weizmann Institute. Though much of their research is basic, they also work on the natural resources of a country desperately needing water. They found that the slightly brackish River Jordan, coming from the Sea of Galilee which is several hundred feet below sea level but still high above the Dead Sea, provides suitable water for the irrigation of citrus fruit. This has become a major resource of the country, especially for export. Trees have been planted all over Israel. The eucalyptus has dried up coastal swamps, and malaria is extinct. We were told that elsewhere the nearly hundred million trees that they have planted have actually changed the climate.

When one gets off the plane, the country hits him with a blast of heat and a sense of dryness. Then the overpowering light heightens his appreciation of the sharp drop in temperature, and he seeks to get out of the glare and into any bit of shade. Biblical allusions to dust and heat, "the shadow of a great rock in a weary land," are borne in upon one with immense force. The long heritage of experience explains why buildings have only slits for windows. They permit air movement, but do not let in much heat or light. This point was overlooked by the architects from our country who designed the new Hadassah Hospital. Large picture windows look out over a majestic and indeed magnificent terrain, but there is the greenhouse effect which converts light to heat and presents new problems of keeping the patients and staff tolerably cool. But everywhere one is caught up in the pioneer exuberance of growth, expansion, and self-sufficiency.

The medical school-hospital complex was built because of the concern and dedication of the Hadassah Zionist women's organization which has many extremely active branches all over this country. The members have taken it upon themselves to provide funds to build the medical school and hospital, and to help equip and support laboratories and academic programs too. Perhaps because Israel itself is unique, this remarkable example of thoughtful benefaction—partly missionary effort, partly a tribute to the ancient home—is unique.

The Zionist movement in Europe had two major and at times conflicting inspirations. One was political and economic, and the other was religious. The foci of major interest in the Zionist movement in Europe, both in time and in place, coincided in fairly large degree with socialistic movements. For this reason, the Israeli government is framed along those lines. In Continental Europe and Britain, the professor is revered. He has a high standing in the community. The chief of a department or institute of medicine has a good income. In Israel however, as far as I could make out, the head of a department in the medical school is paid according to a civil service scale and at a rate comparable to that of clerk, bus driver or union leader. In any event, it was distinctly and significantly lower than what their counterparts in America are paid. The son of a professor who has a fellowship over here may be paid three-fourths of what his father gets. These rough figures represent an order of magnitude, rather than precise numbers. There is a real question whether medical education in Israel, despite all the enthusiasm and devotion, will be able to keep motivation high enough to maintain the high quality of the superb clinical teaching staff. Still, morale now is so high that there is no current lack of competition for good academic positions.

I found the academic structure in the medical school at Jerusalem monolithic. Though the professor might not so view it, the service was *his* service. There was one professor with many subordinates. The *herr geheimraht* pattern was not abused, though it readily lends itself to the repression or enslavement of junior members of a department. In our academic scramble there is incentive to aim for the top, using ability to develop to the fullest. Even viewed from our vantage point, I heard no complaint, and I am not sure there was any recognition of academic lower classes.

Well before Hitler's time, the Zionist movement was sending professional people to Israel, as well as farmers to reclaim land from the desert. In the famous kibbutz throughout Palestine, many prominent European Jewish families had members. The pressures of anti-Semitism, as well as the nostalgic attraction of the ancient land, got Israel well stocked with physicians and scientists some time before Israel became a nation. To a remarkable degree the cream of clinical and scientific Jewish medicine came home to provide teachers for a university medical school. At one stage in the early phase of the new nation's history, there were so many physicians that many could not work as physicians. Even today, the ratio of doctors to population is about twice as high as it is in this country, and perhaps 20 or more times as high as in Jordan. Thus, supply and demand, as well as the rules and regulations of the government, put the practicing physician at a competitive economic disadvantage.

The primary and secondary schools thrive, and with the many sources of population, the country is naturally polyglot. It is effectively bilingual, with Hebrew, the primary language and English the second, but a very close second it is. In addition, many of the people whom we saw were fluent in German, Polish, Russian, French and other languages that I did not even recognize.

I made rounds on the two medical services at the Hadassah School. Dr. Groen, late of Amsterdam, and Dr. Rachmilewitz, from Russia, both fluent in many tongues, were the inspiring and dedicated physician teachers. In every way—in the concerned care for the patient, in the laboratory support of medical investigation, and in the teaching of students, nurses, house staff, and graduate students—the medical enterprise was first-class. It compared well with the top medical schools in this country, Britain, or Europe. Medical students are well motivated. Ideals of service as well as the possibility of careers in public health, community medicine, general practice, teaching, and research constitute strong motives. The students are eager and hard working. The patients are well cared for, and have confidence in and devotion to their physicians. Medical practice in Israel was at a very high level of competence.

One of the unique opportunities which is being exploited systematically is the chance to study a great variety of immigrants—the multitude of different ethnic, tribal or racial groups who bring their physical structures, their genetic heritages and their quickly changed customs to a new environment, where there are new activities, diet and meteorologic circumstances to make up each person's microclimate. The records are kept with care. Genetically-determined diseases, of which Mediterranean fever is an example, are studied with all the paraphernalia of modern science in an experiment where a melting pot is stirred and seethes before one's eyes. Perhaps great medical discoveries will occur as the twisted strands of heredity and environment in health and in disease are untangled.

Substantial numbers—several hundred thousand people making up roughly a tenth of the population of Israel—are Arabs, mostly engaged in farming and largely living in the central and northern portions of the country. To a surprising degree they are thriving and happy, and seem well adjusted. It would appear that their economic state is distinctly better than the average in Jordan, though I am quoting only heresay. They were the ones who did not have radios when all Arabs were urged to come back to Jordan to help roll through Israel and push the Jews into the sea. The lands of those who departed are still owned by the Arabs, and are rented to whoever may wish to use them. The rent is held in escrow.

There was a fine hospital at Tel Hashomer, near Tel Aviv, in what had been a rest camp for the British in World War I and for the British Air Force in World War II—a scattered series of relatively small buildings designed in considerable measure like the pavilion-plan hospitals of the last half of the 19th century. Its character reflects the strong and friendly leadership of Chaim Sheba, the medical director and head of the Section of Internal Medicine, with whom I made rounds one day. We visited and examined many dozens of patients. They represented many tribes and groups, and I was surprised that the majority of them were Arabs. They got along with the Jewish physicians, not only in a glow of warm friendship but of actual affection and love—far different from what a not too casual study of newspapers, journals and other sources of information might lead one to expect. That experience caused me to hope that a meeting of wise statesmen from Israel and Jordan may ultimately redistribute the medical talent and medical needs of the two countries, to the great and lasting benefit of both. I recognize that such a naive hope is unrealistic and vain, but still the thought keeps recurring and the hope will not evaporate.

My visit to Israel included a trip to the Weizmann Institute, which has many points in common with what used to be the Rockefeller Institute (now Rockefeller University), in this country. Basic science is the main theme, but certain industrial and agricultural needs are served by very practical and effective programs such as characterize the agricultural institutes of our state universities. An up-to-the-minute institute of nuclear physics and an institute for the scientific study of Israel's unique agricultural problems epitomized basic and applied science.

In addition to a day spent at the Weizmann Institute, we had several days to tour through the Mediterranean, approaching Tyre and Sidon, which are in Lebanon, and visiting the ancient Roman forts and ports of Caesaria and Acho (Acre), one of the Crusaders' havens. We saw Capernaum, on the Sea of Galilee, and Nazareth, which is shockingly infiltrated by the hawkers of the tawdry and the garish, and reminded me of the corrupt cheapness of the approaches to Mont San Michael. That experience I rapidly forgot in the pleasant exploration of a kibbutz, one of the communal pioneering units which have turned large stretches of desert into fertile farm land. Now in their second and third generation, the Israelis are moving out of the phase of bleak austerity, though not succumbing to the luxuries and gadgetry of the modern age. Haifa, its lovely harbor seen at night from an elegant hotel on Mount Carmel, was a memorable experience. It shows that one can still combine exquisite beauty with industrial and mercantile growth and activity.

I must not fail to mention my charming and exciting meetings with Joshua Leibowitz, a scholar of medical history, who provided me two bits of enchantment. He shares with me a degree of exophthalmic bibliopathy which can be kept under only moderate therapeutic control by the strictures of a pretty tight purse string. He showed me through the riches of the Freidenwald collection. Dr. Freidenwald, of the well-known Baltimore family, gathered everything he could put his hands on that related to the history of Jewish medicine. Often enough he added things tangential to it, including a considerable amount of arabic material. There were magnificent illuminated manuscripts and a large quantity of incunabula. Savoring book after book gave me such pleasure that soon my pangs of envy were exhausted. Also, Dr. Leibowitz arranged to go with me on a visit of homage to Thomas Hodgkin's tomb, at Jaffa, which I shall comment on in a forthcoming issue of the ARCHIVES OF INTERNAL MEDICINE marking the centenary of Hodgkin's death.

Many visitors, chiefly Jews, had told me that Israel was a stimulating place, but I was unprepared for the feeling of electricity, of excitement, of exuberant hard work, of almost maniac enthusiasm. The people are working so hard that their physicians are sometimes led to despair and to wonder whether they will ever calm down to a

nearly normal existence. Medical teaching and research are at a high level of excellence. Great new opportunities are being exploited with skill, with determination and with scholarship. The practice of medicine is at a very high level. Anyone who can figure out how the oversupply of doctors in Israel can be made to take care of the oversupply of patients in Jordan will make the world a little better place in which to live.

Mental Resistance to Influenza

Some of us may have mental resistance which helps fight off the flu after infection, while others become ill because they are psychologically vulnerable. This is indicated by research reported in a recent American Medical Association publication. There is even a suggestion—although the statistical evidence is not strong—that mental make-up helps prevent the infection itself.

When physicians tested 480 male employees at the Army Biological Laboratories, Fort Detrick, Maryland, they found 96 who could be classed as "psychologically vulnerable" to illness, and another 78 who were termed "intermediates." The remaining 306 were "nonvulnerable," a term indicating a relationship between their psychological health, as determined by testing, and their speed of convalescence from previous illness. When an outbreak of Asian influenza struck the installation, the "vulnerable" men reported illness almost 2½ times as frequently as the nonvulnerable. In both groups, only one in every six men infected by flu virus actually became ill. There was a slightly larger percentage of infection, however, among the vulnerable.

The differences between these infection rates were not statistically significant, but they are "suggestive" of an increased rate of infection in psychologically vulnerable persons, the authors said.

Flu vaccinations proved ineffective in this instance, and did not affect results of the survey. Infection rates were the same among vaccinated and unvaccinated men.

The authors point out that the men at Fort Detrick were particularly suited for this type of study. They were of approximately the same age, and had a high level of education. They also had a good reason to report any illness: the military laboratory works with many kinds of pathogenic microorganisms, and the men had orders to report immediately if they felt ill. In addition, all of the men had undergone psychological testing before the influenza epidemic. Thus, there was little danger that illness influenced their test ratings.

The authors are Leighton E. Cluff, M.D., and John B. Imboden, of the Johns Hopkins University School of Medicine, Baltimore, and Arthur Canter, Ph.D., a professor of psychology in the Department of Psychiatry at the College of Medicine, University of Iowa. The report appeared in the February issue of ARCHIVES OF INTERNAL MEDICINE.

Golf, 1966

Remember 1965? No IMS golf tournament was held because of excesses of rain and cold weather. The Wakonda golf course was closed. So, no play.

We have prizes in reserve from last year, from the following donors:

U. S. Vitamin Corp., New York
Picker X-Ray Co., Omaha, Nebraska
Sherman Lab., Detroit
Astra Pharmacy, Worcester, Massachusetts
Ciba Pharm. Co., Summit, N. J.
Geigy Pharm. Co., Ardsley, N. Y.
Schering Pharm. Co., Bloomfield, N. J.
Warren-Teed Pharm. Co., Columbus, Ohio
Merck, Sharp and Dohme, West Point, Penna.
Upjohn Pharm. Co.
Winthrop Pharmaceuticals, New York
Abbott Pharm. Lab., North Chicago
Ortho Pharm. Corp.
R & R Pickett
Physicians & Hospitals Supply Co., Minneapolis

LOCAL DONORS:

Robinson Wholesale Co.
Ford-Hopkins Drug Co.
King's Prescription Service
Walgreen Drug Store
Kucharo Clothes for Men
Newburn Clothes for Men

Some others probably will be forthcoming after our invitations are sent out. You'll remember that back in 1964 the name of Dr. Wm. Telfer, of Waterloo, was the last name to be inscribed on the cup presented by the Whylie-Farrell Optical Company. The cup is now on display at the IMS office. Who will be the CHAMP this year, at Wakonda, April 24? Please be on hand with your established handicap.

One youngster in a high school social studies class explained a deficit like this: "A deficit is what you've got when you haven't got as much as you had when you had nothing."

—H. J. McCOY, M.D.

At the IMS Annual Meeting, hear

"The Future of Mass Communications, Radio and Television"

an address by Mr. James C. Hagerty, of the American Broadcasting Company following Monday's luncheon

Scientific Articles

Parathyroid Crisis

DON E. BOYLE, M.D., and
EDWARD E. MASON, M.D.
Iowa City

Hyperparathyroidism was first treated by the operative removal of an adenoma at University Hospitals in 1929. Early in the history of this condition, most of the patients who were treated had either advanced osteitis fibrosa cystica, or severe renal disease with renal stones. In recent years a larger number of patients have been diagnosed before any definite bony changes developed, and frequently when there was no evidence of renal disease. A few patients with very vague and mild symptoms have been diagnosed because someone thought of the possibility, and obtained a serum calcium and phosphorus analysis.

It is said that physicians learn from their mistakes. Hyperparathyroidism is sufficiently infrequent and vague in its symptomatology so that many patients have been misdiagnosed or overlooked for years prior to definitive treatment. An occasional patient with parathyroid crisis can pass through the hands of many physicians and make a dramatic exit before the diagnosis is made. Following is one of these sobering examples of confusion and delay in diagnosis, and we present it in the hope that other patients will benefit.

A 44-year-old Negro female was admitted to University Hospitals in a comatose state. According to a letter sent with the patient, she had not been well for two months following an abdominal hysterectomy and bilateral salpingo-oophorectomy for a fibroid uterus that had been performed for severe menorrhagia. At that time she was said to have had a 30-pound weight loss within the previous year, but it had been attributed to emotional and marital problems.

The patient's postoperative course had been uneventful for one month, but then she had developed symptoms of nausea, vomiting, headache, malaise, and chills—symptoms that were thought to be due to influenza. When no improvement occurred, she had been admitted to a local hospital, where a diagnosis of acute pyelonephritis was made. She was treated and she improved. A psychiatric evaluation was also obtained and the resultant diagnosis was acute reactive depression, probably due to marital problems. She was given medication, and again seemed to improve for a few days.

She then began to complain of low-back pain radiating into the buttocks. She had been seen by a neurosurgeon several years previously for that complaint, and a myelogram at that time had been equivocal for a displaced disc. Orthopedic consultation was obtained. Roentgenographic studies of the patient's back were said to show no abnormality. The blood calcium was found to be 7.9 mEq/L, and the phosphorus 3.4 mg. per cent.

Hyperparathyroidism was next considered, and an intravenous pyelogram was interpreted as showing evidence of bilateral chronic pyelonephritis and a right ureteropelvic obstruction. Cystoscopic examination showed chronic inflammation of the bladder.

It was felt that the renal findings did not require an operation at that time. Roentgenographic studies of the hands and jaws failed to support the diagnosis of hyperparathyroidism. A week prior to transfer, laboratory studies showed a blood urea nitrogen of 10, and a creatinine of 1.1 mg. per cent. The serum calcium was 7.9 mEq/L, and the phosphorus 2.3 mg. per cent. The acid phosphatase was 0.76; the alkaline phosphatase, 3.5; and the PSP, 13 per cent excretion in two hours.

The patient continued to feel bad, and because numerous breast masses had been noted, mammography was performed. It showed only one suspi-

cious area behind the left nipple. It was then noted that the patient's speech was becoming slurred. Two days before transfer, the total serum protein was found to be 7.9 Gm. per cent, with albumin 3.9 and globulin 4.0 Gm. per cent. The serum calcium was 9 mEq/L, and the alkaline phosphatase 2.0. The patient had a convulsive seizure and lapsed into semicoma, with her eyes deviating toward the left.

She was transferred to the University Hospitals with a detailed summary including the above information. Physical examination at University Hospitals revealed a slender Negro woman who responded only to pain and was having occasional Cheyne-Stokes respirations. Her eyes deviated to the left. The blood pressure was 140/100 mm. Hg, and the pulse was 160/minute. The temperature was 103.8° Fahrenheit. There were numerous lumpy areas in the breasts. The lungs were clear. There was a grade-two systolic murmur, heard best at the apex. The extremities were flaccid. Deep-tendon reflexes were normal. Plantar reflexes were down.

An electroencephalogram was very abnormal, and according to the interpretation it suggested a poor prognosis. A brain scan suggested a probable lesion in the left frontoparietal area, with possible parieto-occipital extension. An increase in activity over the right fronto-lateral area was considered compatible with a subcutaneous hematoma. An electrocardiogram showed paroxysmal tachycardia with subendocardial ischemia. Roentgenograms of the skull, chest and abdomen showed osteoporosis of the bony structures. The serum calcium was 22 and the phosphorus 2.8 mg. per cent. When these results had been obtained, the patient's neck was reexamined, and a nodular mass was found in the area of the left lobe of the thyroid.

It was decided to institute immediate peritoneal dialysis and to give ethylene diamine tetraacetic acid (EDTA) and steroids in the intravenous fluids. A cooling blanket was used to maintain a normal body temperature. Among other test results was a blood urea nitrogen of 40 and creatinine of 1.2 mg. per cent, and a carbon dioxide content of 23, sodium 149, potassium 3.8, and chloride 116 mEq/L. The alkaline phosphatase was first found to be 4, but a repeat showed 2.6 S.U. The fasting blood sugar was 120 mg. per cent, and the serum GOT was 47 S.F.U. The patient was given 6 liters of intravenous fluids within the first 24 hours, with one ampule of EDTA and 600 mg. of Solu-Cortef®. The next day, after approximately 14 hours of dialysis, the serum calcium was 20.2 and phosphorus was 2.4 mg. per cent. Five hours later and after approximately 19 hours of dialysis, the calcium was 18.6 mg. per cent.

The same regimen was continued, although the dose of intravenous fluids was gradually decreased. The patient continued to produce a normal volume of urine in spite of peritoneal dialysis. During the first 12 exchanges the dialysis removed 1.7 Gm. of calcium. A 24-hour urine calcium was 316 mg. After 36 hours of dialysis, the serum calcium was still 18.2 mg. per cent. After approximately 60 hours of dialysis, the serum calcium was 16 and the phosphorus 2.8 mg. per cent.

An operation was performed, and the left lower pole of the thyroid was found to be cystic and nodular. A left subtotal thyroid lobectomy was done. One normal parathyroid was found in this tissue. When the right superior parathyroid was excised, it measured 1.0 x 2.0 cm. and was felt to represent an adenoma. The right inferior parathyroid measured 3.0 mm. in diameter, and was biopsied. The mediastinum was explored over the anterior surface of the trachea, and no additional parathyroid tissue was found. The patient seemed to tolerate the operation rather well, except for a brief episode of nodal tachycardia which responded quickly to 2.0 mEq. of intravenous magnesium sulfate. Approximately three hours after operation, the blood pressure suddenly decreased, the patient stopped breathing, and a cardiac monitor showed ventricular fibrillation.

At autopsy, a parathyroid adenoma (3.5 x 1.5 x 1.2 cm.) was found on a 2.5 cm. stalk in the left substernal, paratracheal area (Figures 1 and 2). Other postmortem findings included a small fresh subarachnoid hemorrhage of the left cerebral hemisphere, mammary dysplasia, pelvic peritonitis and mesenteric abscesses, multiple pulmonary thromboses, hemorrhagic cystitis and hemorrhagic gastritis. Microscopic examination of the kidneys showed small deposits of calcium in the tubules, and tubular degeneration. Minute foci of chronic inflammation and mild diffuse interstitial fibrosis were also shown. The peritonitis and abscesses were probably secondary to peritoneal dialysis, and the culture grew E. coli and a species of the Klebsiella-aerobacter group. Postmortem laboratory studies included a blood urea nitrogen of 25, a serum calcium of 18.2, and a creatinine of 2 mg. per cent.

The above summary of the hospital record fails to reveal that the patient had been consulting various physicians, including physicians at University Hospitals, over a period of eight years. At the beginning of that period, she had complained of weakness, fatigue, dizziness, sweating of the hands and decreased heat tolerance, and a nodule was observed in the left lobe of the thyroid. Her sedimentation rate was 60 mm. per hour. Her thyroid function tests were all in the euthyroid range. It was thought that she probably had thyroiditis, and the subsequent observations on an outpatient basis were all focused on the lump in the thyroid, and on whether it represented a nodular goiter or whether some consideration should be given to ruling out a carcinoma of the thyroid. The systemic symptoms were either blamed upon thyroid-

itis or left unexplained, and no one thought of the possibility of hyperparathyroidism. The psychiatric disturbances, pyelonephritis, low-back pain, and weight loss mentioned in the above summary are typical, but obviously are not specific for hyperparathyroidism.

Because of confusion about the units in which the serum calcium was reported, there was a delay in the serious consideration of the diagnosis even after it has been suggested, but when the serum calcium was reported to be 22 mg. per cent instead of 9 mEq/L, attention was definitely focused upon hypercalcemia as the probable cause of the patient's deterioration and coma. Strenuous efforts were then made to reduce the serum calcium levels by means of peritoneal dialysis and ethylene diamine tetraacetic acid (EDTA). Early during the patient's terminal illness, neurologic, neurosurgical and general surgical consultations were obtained in an effort to find the cause of the coma and to see whether carcinoma of the breast and cerebral metastases perhaps were present. The consultants did not discuss hyperparathyroidism as a possible diagnosis.

When hyperparathyroidism finally was given serious consideration, there was little unanimity about timing the operative intervention. Some of those caring for the patient felt that the serum calcium should be reduced to a normal level before the operation. Also, they were disturbed by the seeming ineffectiveness of the dialysis and other measures instituted to lower the serum calcium. Finally, the surgeon who operated upon the patient was insufficiently persistent in his search for a large adenoma and for all of the parathyroid bodies. He settled for an enlarged parathyroid gland, and it was only at autopsy that a really large adenoma was found.

Contrast this sequence of errors with the following patient who had been seen a few years earlier. A 57-year-old white male laborer was admitted to University Hospitals with a story of fatigue and weakness of five years' duration. On several occasions, dark stools and anemia had required blood transfusions. In the course of searching the gastrointestinal tract for a cause of the anemia, someone ordered a serum calcium and phosphorus analysis, and these were reported to be 14.5 and 1.6 mg. per cent, respectively. Renal stones were also observed in the course of an intravenous pyelogram that

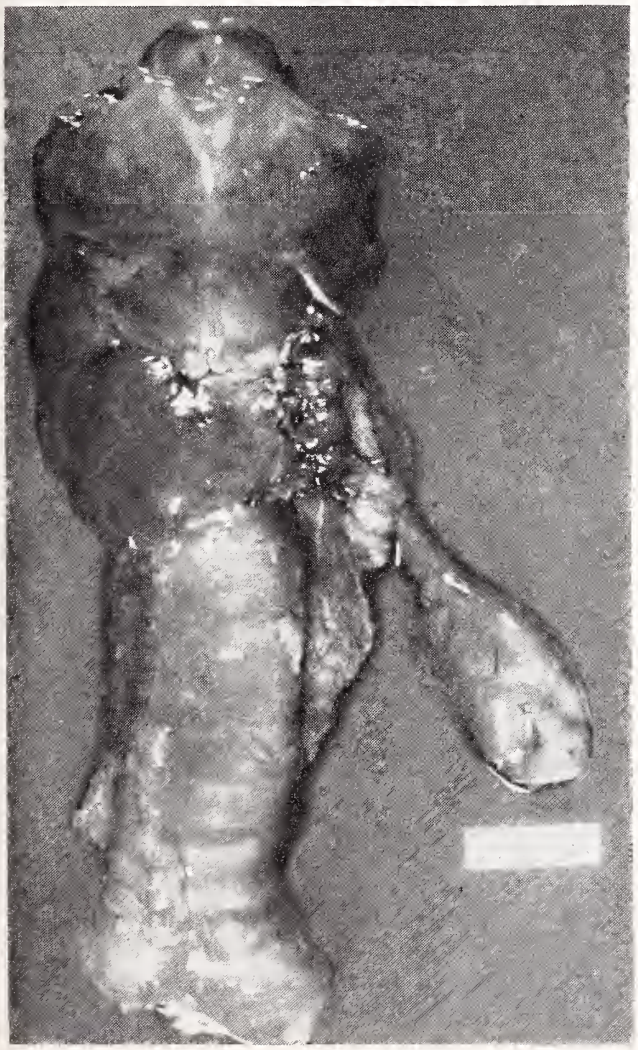


Figure 1. Parathyroid adenoma (3.5 x 1.5 x 1.2 cm.) on a 2.5 cm. stalk which was located in the left substernal paratracheal area. Sutures from recent lower pole partial thyroidectomy are shown.

Figure 2. Hemisection of parathyroid adenoma showing a small area of necrosis.

was obtained as part of a workup for possible prostatitis. The diagnosis of hyperparathyroidism was suggested. Repeated analyses of serum calcium and phosphorus were consistently and typically abnormal. Urinary calcium excretion was high in several 24-hour collections. Roentgenographic study of the stomach did not show any duodenal ulcer, but gastritis was observed by endoscopy and it was postulated that the patient might have bled from a hemorrhagic gastritis secondary to hyperparathyroidism.

The patient was transferred to the metabolic ward, and further study was planned. Shortly after the transfer, it was found that the patient's serum calcium had risen to 17.5, and the phosphorus was still 1.8 mg. per cent. The alkaline phosphatase was 1.6 S.U., and the albumin was 4.6 and the globulin 2.0 Gm. per cent. The patient had no alteration in his symptoms or personality at that time, but surgical consultation was obtained because of his very abnormal serum calcium.

The patient appeared cachectic. There were no abnormal masses in the neck or other unusual physical findings, except that the patient seemed very weak and was quite loose-jointed, being able to place his foot behind his head. He also walked with a loose, shuffling gait, as though there were instability of his joints. Roentgenograms of the hands and wrists showed no abnormalities such as bone cysts or subperiosteal absorption, and no decalcification. Since the patient was edentulous, the lamina dura could not be examined.

An emergency operation was performed. A slightly enlarged parathyroid was found behind the left lower pole of the thyroid. A left superior parathyroid a few millimeters in diameter was biopsied. A normal-appearing parathyroid was found superiorly on the right, and a 22 x 10 x 8 mm. yellowish-brown parathyroid adenoma was removed from behind the right lower pole of the thyroid.

Postoperatively the serum calcium and phosphorus levels returned to normal. There were a few episodes of hypocalcemia, but they responded to calcium administration. This patient remained well and has not been anemic since the operation.

In both of these patients the serum calcium and phosphorus analyses were obtained as a part of a large battery of tests, but without any very definite expectation that hyperparathyroidism would be found. The abnormal high calcium and low phosphorus stimulated a serious consideration of the correct diagnosis. In the first of these cases, the crisis was fully developed and the patient's general condition had deteriorated by the time an emergency operation was undertaken. In the second instance the emergency was solely on the basis of the high serum-calcium level, and an operation was undertaken (as the note in the patient's chart indicates) to prevent development of mental confusion, renal failure, and other possible complications of severe hypercalcemia.

These first two patients suggest that hyperparathyroidism will be diagnosed when patients with the disease come into some situation in which serum-calcium analyses are part of the screening routine. Effective treatment will ensue when the surgeons involved in the patient's care are familiar with the dangers of the disease and are sufficiently experienced in the operative search for parathyroids.

Although this condition is rather uncommon, it has confronted surgeons from time to time for over 30 years. The following patient was admitted to University Hospitals on April 15, 1929. A 20-year-old white male entered complaining of weakness and aching in the arms and legs of five years' duration. When he worked, he tired easily. He had also noticed a bowing of his legs that had begun four years prior to his admission. Any exertion increased the dull aching in his legs and arms. His appetite was very poor, and there had been several episodes of vomiting.

He weighed 118 pounds. His skin was dark, and the shape of his epicanthus gave him a mongoloid appearance. His chest was barrel-shaped, and had a rachitic rosary. His blood pressure was 110/70 mm. Hg. His admission serum calcium was 16.8, and his phosphorus 3.0 mg. per cent. The calcium excretion was in excess of 500 mg. per day, in spite of the fact that the fecal calcium excretion was nearly equal to the daily intake. The urinary phosphorus excretion was also above normal. Just prior to operation the serum calcium reached 17.5 and the phosphorus was 2.2 mg. per cent.

An operation was performed by Dr. Frank Peterson. The right lobe of the thyroid was mobilized, and two parathyroids were found on its posterior surface. The lower one was two or three times the size of the superior, but both had a yellow color and neither was thought to be abnormal. On the left side, the superior parathyroid was located and appeared normal, but no inferior parathyroid could be found. A walnut-sized mass was then palpated low in the neck on the left and separate from the thyroid. It had a capsule, and within the capsule was a brownish-blue mass which was easily removed. The specimen was 3 cm. in diameter, and was diagnosed microscopically as a parathyroid adenoma.

By 18 hours after the operation, the serum calcium had fallen to 12.3 mg. per cent, and on succeeding days it was 10.7 and 8.5 mg. per cent. The phosphorus levels remained low. From the second to the sixth day after operation, the patient was given parathyroid extract hypodermically. He was followed for 17 years and treated for the progressive complications of his "cured" disease, the most serious aspect of which was a progressive deterioration in renal function which finally led to his death.

This patient is interesting in that he illustrates the dangers of neglecting the diagnosis of hyperparathyroidism and the potential for progression of renal disease even after hyperparathyroidism has been successfully treated. His is also a remarkable case in that he was correctly diagnosed and treated only a few years following the classic patient described by Mandl, one who also had severe bony disease beginning at an early age and was successfully operated upon in July, 1925—the first parathyroid operation in the world.[2]

DISCUSSION

Parathyroid crisis frequently represents a failure on the part of those who care for the patient. Either it is not diagnosed early enough, or if diagnosed promptly, the seriousness of the condition is not fully appreciated. Often, at some time in the course of their complaints, these patients are thought to be in need of psychiatric care. The disease has been characterized as one of stones, bones, abdominal groans and psychic moans with fatigue overtones.[5] For the most part, the symptoms are probably due to hypercalcemia, and are related to the gastrointestinal tract, the kidneys, and neuromuscular and skeletal tissues. The patients complain of anorexia, nausea, vomiting, constipation, diarrhea, abdominal pain, nocturia, polyuria, thirst, headaches, backaches, bone pain, aching thigh muscles, weakness, lethargy, loss of interest, exhaustion after mild physical effort, dizziness, fainting and confusion, as well as of the symptoms of actual peptic ulcer, pancreatitis, renal stones, and kidney infection.

Some physician must think of the possibility of hypercalcemia, and must be able to obtain reliable serum calcium and phosphorus analyses. If the serum calcium is elevated, confirmation of the diagnosis requires a second observation of elevated serum calcium and depressed phosphorus. At least two 24-hour urine collections showing an elevated calcium excretion add to the evidence. The alkaline phosphatase may be elevated if the patient has bone decalcification. Plasma proteins must be determined, and the albumin/globulin fractions are needed if one is to estimate the level of ionized serum calcium. Pathognomonic changes may be seen in roentgenograms of the skull, lumbar vertebrae and pelvis, and particularly of the hands. Special studies such as the ratio of phosphorus clearance to creatinine clearance[20] may be helpful, since one of the main actions of parathormone is to inhibit re-absorption of phosphorus in the renal tubule, thereby increasing phosphorus excretion. If such a patient approaches parathyroid crisis, he often has a high pulse rate, and at least half of the patients have fever, as was illustrated in the first patient presented here. Sudden changes in behavior are not uncommon. They may be mild and difficult to recognize, or there may be obvious psychosis or coma. In patients with crisis, abdominal pain is common.

Hewson[15] has described a patient with ulcer-like symptoms who took medications for his ulcer and probably greatly increased his calcium intake, thus precipitating a crisis situation. This particular patient had only a four-week history progressing to nausea, vomiting, severe weakness, a 17-pound weight loss and constipation, and then some hours after his admission, while a physician was talking to him, he suddenly died. In a patient who has the typical chemical picture of hyperparathyroidism and in whom repeated measurements are being made, a further rise in serum calcium and a concomitant rise in serum phosphorus signify renal insufficiency, and renal function is probably failing. These are also dangerous signs in that they suggest that the renal disease may ultimately be fatal, even if parathyroid overactivity is corrected.

When the suspicion of hypercalcemia has led to the report of a high serum calcium, the diagnosis may still be in doubt. There actually are more patients with hypercalcemia due to malignancy than to hyperparathyroidism, and carcinoma of the breast is the leading cause of hypercalcemia among the malignancies. Vitamin-D poisoning, sarcoidosis, multiple myeloma, hyperthyroidism, primary bone disease, immobolization, and even laboratory error or dirty specimen tubes may be responsible for the laboratory finding. In patients with hypercalcemia due to cancer, cortisone[19] is often too slow to use in a patient with parathyroid crisis. A bone survey will quickly rule out the majority of patients with metastatic cancer. Early ambulation will correct elevated serum calcium levels due to immobilization. In a patient approaching crisis from hypercalcemia, exploration of the neck in a search for parathyroid adenoma or hyperplasia may be justified, even though one may occasionally find later that the patient actually has a non-parathyroid neoplasm. Keynes[17] has reviewed the criteria for the clinical diagnosis of hyperparathyroidism by the means generally available at present. Immunoassay of parathormone[14] may soon be available as a specific diagnostic test.

In many instances the diagnosis of hyperparathyroidism is first entertained as the result of a serum-calcium measurement that the physician requested merely because everything else had been tried. Usually, when the diagnosis is made, it is already late in the course of the disease. It would seem profitable to introduce serum-calcium analyses as a routine in medical practice. This has been done. Boonstron and Jackson[5] analysed 26,000 consecutive patients in a general medical clinic and found the incidence of hyperparathyroidism to be 1 in 850 patients. They also found six patients with hypoparathyroidism and some 30 with other diseases causing hypercalcemia. In Sweden, Johnsson and Lundvall[16] have deter-

mined serum-calcium levels on all patients with predominantly gastrointestinal symptoms, and their report shows that in over 20 cases, during a three-year period, patients not suffering from renal calculi were verified as having primary hyperparathyroidism. They suggest that estimations of serum calcium on all patients with ulcers or unclear abdominal symptoms would lead to an increase in the rate of diagnosed hyperparathyroidism.

Such a routine would seem to be feasible with the use of an automatic analyzer that can process specimens at the rate of 40 per hour. Perhaps if such a program were instituted there could be some reduction in the charges for these analyses, but there is an economic conundrum here. Why should 849 patients pay for laboratory screening tests that they don't need? Or on the other hand, how can one charge the affected patient for the 850 tests that have been performed in finding his hyperparathyroidism? Such problems are economic and perhaps even political, but they must be solved if this disease is to be found early.

The incidence of parathyroid toxicity is fortunately low, but it too adds to the difficulty in diagnosis, since many physicians never see such a patient. Hanes[12] is thought to have reported the first death from parathormone intoxication in 1939. A 13-year-old child has been reported[22] who had undergone a personality change at the age of 10, becoming irritable, seclusive, distracted and dull. She also complained of epigastric pain, nausea, vomiting, frequent urination, loss of appetite, and leg pains at night. An emergency operation was performed when the calcium increased to 22.4, and when the phosphorus was 3.9, and the blood urea nitrogen 90 mg. per cent, with a decrease in urine volume. There was a prompt and seemingly complete recovery following the removal of a 6-Gm. adenoma. Albright suggested that a serum calcium level of 17 mg. per cent or above might be regarded as indicating impending toxicity, and Payne and Fitchett[21] listed some 50 such patients who had been reported in the literature. It is not uncommon to find areas of hemorrhage or infarction in parathyroid adenomas in patients operated upon in crisis. In some patients with cystic changes in the adenoma, such a degeneration of part of the adenoma with release of hormone may have accounted for previous exacerbations and remissions of symptoms. Staub, Grayzel, and Rosenblatt[24] reported a patient with a mediastinal tumor 7 cm. in diameter, in whom acute intoxication occurred following roentgen irradiation of the mediastinum. The calcium rose to 23 mg. per cent, and the patient underwent rapid renal calcification, uremia, and death.

TREATMENT OF HYPERPARATHYROIDISM

Those who have reported patients and reviewed the literature of parathyroid toxicity always reach the same conclusion—namely, that these patients are too sick *not* to be operated upon, and that the only effective treatment is removal of the offending parathyroid tissue.[9, 23] Some authors have reported attempts at medical treatment in an effort to improve the operative risk. Both peritoneal and hemodialysis have been disappointing, probably because of the tremendous stores of calcium in the bones. EDTA has been tried, but there is some concern about its use since even without hypercalcemia this chelating agent has caused renal damage. Magnesium has been used, especially in patients with cardiac-rhythm disturbances. Actual serum-magnesium levels below normal are not usually seen until after the parathyroid adenoma has been removed. Albright[1] suggested in 1932 that sodium acid phosphate might be considered for brief treatments of hyperparathyroidism, since the most striking chemical abnormalities are an excessive excretion of phosphorus by the kidney and a very low serum phosphorus. He presented data from three patients who had been subjected to balance studies and treated with oral phosphate, with a resultant lowering of the serum calcium, an elevation of the serum phosphorus, a reduction in urinary calcium excretion and a continued excretion of large amounts of phosphorus in the urine.

In that same paper Albright stated that the lowering of blood phosphorus indicated the degree of hyperparathyroidism, and he warned of the dangers of phosphate administration. The first danger is that the administration of phosphorus will cause a rise in the serum phosphorus level without a concomitant fall in serum calcium. An excessive production of calcium and phosphorus will lead to an abnormal precipitation of calcium phosphate in kidneys, stomach, thyroid and lungs such as had occurred in animals dying of excessive parathormone. The second danger about which he warned is a precipitation of calcium-phosphate stones in the kidney and collecting system, since the administered phosphate causes a tremendous increase in the excretion of urinary phosphorus. Albright recommended forcing fluid and maintaining an acid urine. If a diuresis is attempted, extra magnesium will be required.[18] He suggested the monosodium phosphate, both because it is better tolerated when taken by mouth and because it causes a more acid urine. He observed that it is possible to give phosphate by mouth and to achieve a normal product of calcium and phosphorus in the serum.

Canary[7] has studied the serial changes in calcium and phosphorus balance after parathyroid surgery, and has observed a retention of phosphorus greatly in excess of the observed rise in serum phosphorus, suggesting that there may be a great deficit of this ion in extraskeletal tissues. Urinary phosphorus is immediately and markedly reduced following successful treatment of hyper-

parathyroidism. There is evidence that parathormone may have an influence upon basic cell metabolism, even outside of bone.[3, 13]

We probably have been remiss in concentrating so much attention on the elevated serum calcium and so little upon treating the phosphate depletion. There have been a number of reports of the beneficial effect of phosphate administration.[6, 14] The most recent and extensive experience is that of Goldsmith and Ingbar[10] who have described the results of phosphate treatment for hypercalcemia in 15 patients, four of whom had hyperparathyroidism. They see no contraindication to the use of phosphate in the treatment of acute hypercalcemia, and perhaps with this adjunct it will be possible to restore patients to a normal state of neuromuscular irritability and to improve their state of hydration and general condition so that they can undergo surgery with less risk. They have added a note of caution[11] about the possibility of causing hypocalcemia and tetany from the use of intravenous phosphate, and they now believe it advisable to begin treatment with 50 millimols of phosphate, half of the intravenous dose recommended in their original report. One can then give the remaining half if it is indicated by the response of the serum calcium. It would seem advisable, however, to go ahead with the operative treatment within a few days after starting such therapy. The situation here may be analogous to the treatment of thyrotoxicosis with iodides in preparation for surgery. There may be a time limit on the effectiveness of such non-curative manipulation. At the time of operation, the finding of one adenoma should not satisfy the surgeon. The other glands should be identified, for a second adenoma or hyperplasia may be present.

As long as the hyperparathyroid crisis has been recognized, emergency operations have been recommended as the only effective and safe treatment. Various authors say any delay in treatment is dangerous, and not enough emphasis is placed on the emergency nature of this condition. Fever and rising blood urea nitrogen add to the urgency, rather than contraindicate an operation. Experimentally in dogs, Carone[8] has shown that even 24 hours of hypercalcemia can cause sufficient calcification in the nephron to produce a decrease in the glomerular filtration rate and an elevation in the blood urea nitrogen, and to show marked structural alterations microscopically. The conclusion following this animal work was that every effort should be made clinically to avoid hypercalcemia. Myocardial and brain damage may also occur during the phosphate depletion of parathyroid intoxication.[25]

The average physician may never be required to diagnose and treat a patient in hyperparathyroid crisis, and it is to be hoped that he will not be required to make the diagnosis at autopsy. Most physicians, however, will have opportunities to diagnose hyperparathyroidism during its earlier stages, and thereby possibly to prevent a later crisis. They will miss these opportunities unless they have a high index of suspicion and unless they have a dependable laboratory perform what may seem to be many unnecessary serum-calcium analyses.

SUMMARY

Two patients have been presented to illustrate both failure and success in the treatment of severe hyperparathyroidism. A third patient upon whom Dr. Frank Peterson operated successfully in 1929 and who was followed for 17 years until he developed advanced renal insufficiency, illustrates the late renal failure that may result.

The diagnosis should be made early. Both the physician and patient must be convinced of the seriousness of the problem so that the necessary operative procedure or procedures can be performed to remove the offending over-active parathyroid tissue. A plea is made for earlier diagnosis, but it may not be common until it is possible to make serum calcium analyses a routine screening procedure for all patients seen in general medical practice.

Interest in phosphate for the treatment of hypophosphatemia has recently been revived, and it may have much to offer the patient in parathyroid crisis by making it possible to perform operations with less risk, but operative treatment should remain an urgent if not an emergency procedure when this diagnosis has been made.

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The Differential Diagnosis of Azotemia

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THE PATIENT with an elevated blood urea nitrogen often poses a perplexing diagnostic problem. A careful, systematic analysis of the history, signs and symptoms is mandatory, for a determination of the etiology should precede the initiation of therapy. The azotemic patient may be seen initially by any physician, and he may have complaints which suggest a neurologic, urologic, gastrointestinal, dermatologic or psychiatric disease. The following case history illustrates how azotemia caused by obstructive uropathy may be associated with symptoms suggestive of another disease process.

CASE HISTORY

W. W. was first seen by a physician on October 21, 1965. His chief complaints involved a two-week history of diurnal and nocturnal polydipsia and polyuria, associated with extreme thirst. The remainder of the history was non-contributory, and a physical examination was reported to have been within normal limits. The urinary specific gravity was 1.002, but the urinalysis was otherwise normal. The blood urea nitrogen was 45 mg. per cent.

The patient was hospitalized, and his urinary output averaged 9,000 ml./24 hrs. for the first several days. On October 27, the attending physician concluded that the diagnosis was diabetes insipidus, and started therapy, administering five units of Pitressin intramuscularly each day until November 17. There was a marked improvement in the polyuria, but the specific gravity of the urine never rose above 1.004.

In December, the patient was transferred to the Medical Service of University Hospitals. He was first seen by the Department of Urology on December 7. At that time the positive physical findings consisted of a mass in the lower abdomen, and a slightly enlarged, soft and benign prostate gland. Urinalysis was chemically and microscopically negative. An infusion intravenous pyelogram showed prompt function in very poor concentrations from bilaterally hydronephrotic kidneys.

A No. 18 urethral catheter was inserted into the bladder, 600 ml. of urine was removed, and the remainder of the residual was evacuated at the rate of 100 cc./hr. The diagnosis of bladder-neck obstruction with bilateral hydronephrosis was made. On urethral-catheter drainage, the urinary output continued to average 5,000-6,000 ml./day, and the patient was supplemented with intravenous electrolyte solutions. Although the diuresis secondary to obstructive uropathy abated after 10 days of urinary drainage, the patient was discharged with an indwelling catheter, and was scheduled to return one month later for a transurethral resection of the prostate gland. Upon readmission, the blood urea nitrogen was 16 mg. per cent. Following the operation, he voided normally, and a repeat intravenous pyelogram showed complete return of function from two normally-draining kidneys.

THE CAUSE MUST BE FOUND

The history and hospital course in this case demonstrate that when a patient with azotemia is encountered, incorrect treatment may be adminis-

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tered unless a systematic diagnostic program is undertaken. Every physician should investigate the differential diagnosis of azotemia by first dividing the syndrome into three main categories: prerenal, renal and postrenal causes. Second, he should embark on a series of diagnostic tests designed to unearth positive findings that suggest the etiology of the azotemia. Only when the diagnosis has been established can the physician treat the specific pathologic process. A diagnostic approach which avoids irrational conclusions will lay the groundwork for a sound therapeutic program.

Generally, the prerenal conditions which cause azotemia may be grouped into four main syndromes. Marked hemoconcentration as a result of starvation, vomiting, sweating or diarrhea may cause an elevation of the blood urea nitrogen. Similarly, gastrointestinal bleeding may cause moderate azotemia secondary to the absorption of excess products of protein digestion. Third, severe toxic or febrile conditions causing a marked increase in protein catabolism may produce an elevation of the blood urea nitrogen. Finally, cardiac decompensation with passive congestion of the kidneys decreases the glomerular filtration rate and the effective renal plasma flow enough to cause urea-nitrogen retention.

Renal disease may also cause azotemia. Chronic glomerulonephritis and pyelonephritis are the two most common parenchymal causes of azotemia. However, arteriolonephrosclerosis and toxic nephritis, allergic nephritis and the nephritites associated with collagen disease may also cause elevation of the blood urea nitrogen. Acute renal infarction or venous thrombosis may also be a cause of renal azotemia.

Postrenal disease is the most common cause of azotemia in the older age groups. Benign prostatic hyperplasia, or carcinoma of the prostate, cervix or bladder should be considered in the undiagnosed uremic patient who presents in coma. Less common conditions such as retroperitoneal fibrosis, bilateral ureteral calculi, or aortic aneurysm may also cause elevation of the blood urea nitrogen. Meatal stenosis, urethral stricture and bladder-neck contracture are more infrequent causes of azotemia.

Therefore, to approach a differential diagnosis of azotemia systematically, one must determine initially whether the disease is prerenal, renal or postrenal. The history may or may not give a clue as to the elevation of the blood urea nitrogen. Physical examination should then be performed, and special attention must be paid to the abdomen, for one must look for evidence of an enlarged urinary bladder or an aortic aneurysm. An attempt should be made to palpate the kidneys, for bilateral enlargement suggests polycystic disease. Peripheral pulses should be noted. The prostate gland should be carefully examined as to size and consistency, and a pelvic examination should be a routine part of the evaluation of a female patient. If the physical examination is non-contributory, the urinalysis may be quite significant. The specific gravity, the determination of urinary glucose and albumin, and a microscopic examination of the sediment are the most important aspects of this analysis.

Following the history, physical examination and urinalysis, taking a plain film of the abdomen is the next step in a systematic program to delineate the nature of the azotemia. This simple x-ray examination often demonstrates the sizes of the kidneys and/or reveals a large abdominal mass, an aortic aneurysm or urinary radio-opacities. In addition, metastatic bone disease may suggest carcinoma of the prostate and azotemia may be the result of ureteral obstruction.

Renal function should be evaluated thoroughly by means of phenolsulfonphthalein excretion, serum creatinine and creatinine clearence tests. An intravenous pyelogram may be performed on any patient, but the urinary tract may be difficult to visualize in the presence of severe azotemia. Double dose, triple dose and infusion intravenous pyelography should be administered to patients with azotemia in an effort to distinguish parenchymal from obstructive renal disease. There is no contraindication to intravenous pyelography other than allergy to the contrast material. Intravenous urograms in patients with azotemia may not delineate the more delicate morphology of the collecting system, but despite the kidney's poor concentrating ability, this examination can be used to distinguish obstructive from parenchymal disease. A post-voiding film may demonstrate residual urine suggesting that obstruction is causing the azotemia, and that urethral catheter drainage should be employed as a part of the treatment program.

Radioactive renography performed early in the course of the disease may be helpful in differentiating hydronephrosis from intrinsic renal disease. Renograms performed after long periods of either obstruction or chronic parenchymal renal disease usually appear similar.

When the intravenous pyelogram fails to aid in the differential diagnosis of azotemia, retrograde pyelography should be performed. Ureteral catheters should be passed to the renal pelves, and urine from each kidney should be examined separately. The amount of urine and the configuration of the urinary collecting system seen on pyelography should permit one to differentiate between parenchymal and obstructive renal disease. Hydronephrosis not only can be effectively diagnosed but can be rapidly relieved. The nature of the parenchymal renal disease can be suspected but not finally determined until after a renal biopsy. An azotemia which is not on the basis of obstruction may respond to peritoneal or hemodialysis.

SUMMARY

In summary, one should approach the patient with idiopathic azotemia with a definitive diagnos-

tic program in mind. History, physical examination, urinalysis, a plain film of the abdomen, renal function studies and intravenous pyelograms should be performed. Radioactive renography and retrograde pyelography may also be necessary. Azotemia may then be explained on a prerenal, a renal or a postrenal basis. The treatment can thus be intelligently applied to the disease.

Testing Antibiotics and Chemotherapeutic Agents

The Drug, the Manufacturer and the University Hospitals

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DR. KARL H. BEYER[3] INTRODUCED a drug-safety symposium in JAMA, about two years ago, by saying, "Any drug, new or old, miraculous or mediocre, will affect or appear to affect some patients adversely. Even bed rest has been called the most dangerous of therapeutic procedures. The safety of a drug can be assessed sensibly only in terms of what it is intended to do."

At university hospitals there are trained investigators and the necessary equipment to evaluate new antibiotic medications independently. The clinical effectiveness of a new product can be assessed, its side-effects delineated, its toxicity, distribution and metabolism determined, its antibacterial spectrum confirmed, and certain fundamental aspects of its action studied. The members of the infectious disease divisions by whom these assessments are made can contribute some added knowledge, derived from their basic investigations, from which new developments in the chemotherapeutic field may arise.

THE ACTIVITIES AND RESPONSIBILITIES OF PHARMACEUTICAL MANUFACTURERS

During the past eight years, the Infectious Disease Division at the U. of I. College of Medicine has assessed various aspects of 18 chemotherapeutic agents introduced by 11 different companies (Table 1). Before sending them to University Hospitals, the manufacturers have already assessed them adequately as to effectiveness against one or several pathogenic organisms in two or more species of animals. Acute and chronic toxicity

TABLE 1

Drugs Tested	MIC's[+]	Studies in Mice	Studies in Volunteers	Studies in Patients	References
†Amantadine*			+		N.P.
Ampicillin			+	+	N.P.
†Cephaloridine*				+	23
Cephalothin				+	23
†Dicloxacillin*				+	12
†Gentamycin	+	+	+	+	9
†Interferon		+			N.P.
Kanamycin				+	N.P.
Lincomycin				+	24
†Methacycline*				+	11
Methicillin	+	+	+	+	20
†Methylamantadine*			+		N.P.
Nafcillin		+		+	N.P.
Novobiocin					26
Oxacillin		+		+	19
†Penicillin derivative	+				N.P.
†Penicillin derivative	+				N.P.
Phenethicillin	+			+	14
Propionyl erythromycin				+	17
Vancomycin	+			+	N.P.

[+] Minimal Inhibitory Concentration evaluations.
* Study in progress.
† Not yet marketed.
N.P.—Not published.

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and pharmacology have been studied on several species of animals in relation to LD_{50} and the effects of the drug on the renal, hepatic, hemopoietic, cardiovascular and cerebral systems before the drugs can be released. These tests have recently been reviewed.[29] Pharmacologic results in man often are already available, and a few patients may have been treated. In many instances, studies in human subjects have provided information for the university investigators on dose concentration levels after oral, intramuscular or intravenous administration. Bioassay methods are available to guide them in their laboratory studies. The chemical formulas may or may not be known. Detailed protocols of all former studies are sent to the investigators to orient their further evaluations.

Through the manufacturer, the university investigators then apply to the Food and Drug Administration to obtain approval for their investigation. Their protocol supplies a statement of the education and experience of the investigators, and describes the hospital and the institutional and laboratory facilities that are available, the plan for investigations and the report forms that are to be used (Figure 1). The investigators agree to maintain records on the use of the drug, on the patients treated, and on all adverse reactions. Moreover, they agree to maintain their records for inspection over a period of two years. They promise to inform patients and volunteers that they are to be given drugs for investigational purposes.

The problems of the pharmaceutical manufacturer in bringing a drug to the stage of clinical trials have been ably discussed.[1] About 1,000 samples of soil are screened yearly by each manufacturer for likely organisms. About 17,000 cultures are screened by colonial appearances, and 7,000 of them are selected for deep fermentation. About 2,000 of the broths show *in vitro* antibacterial activity. Paper chromatography is used in identifying and rejecting previously studied antibiotics from further testing. At this point in the investigation, the vast majority of the broths are rejected from further study. Tests against experimental infections in mice cut the number of organisms being tested to a small number. Other companies are working on chemical modifications of existing drugs in attempts to reduce pain or phlebitis, to increase organ penetration, to change the antibacterial or antiviral spectrum, to make the drug acid stable for oral use, to reduce allergenicity, or to produce enzyme resistance. This work, each year, supplies another small group of drugs for clinical trial.

The other responsibilities of the manufacturer to the university investigators are less evident. The university laboratory must be kept in operation between tests. For continuity of investigations, stability is necessary. The possible sources of financial help are a consultation grant, a grant for each drug tested, payment per patient treated with a new drug or a separate drug, and laboratory-support grants from the company to the university investigator. "Profit" from these grants must help support the basic researches of the several university laboratories involved in clinical testing. New drugs are often developed from these basic researches. For instance, we believe our investigations into the chemistry of death from staphylococcal infections may lead to the development of new drugs.[21]

Visits from the clinical directors of the drug manufacturing companies are very useful in coordinating the programs of different centers. Telephone consultations regarding unexpected reactions have been very useful to us in assessing the relevance of our first case of eosinophilia or febrile response in a particular study.

Mutual trust as regards quotations from the articles that result from these investigations, and in particular, restraint and good taste in advertising help to assure continued cooperation between the company and the clinical investigators. In general, the drug companies have been extremely cooperative in this regard, and only once has it been necessary for us to take steps to restrain an injudicious use of our material.

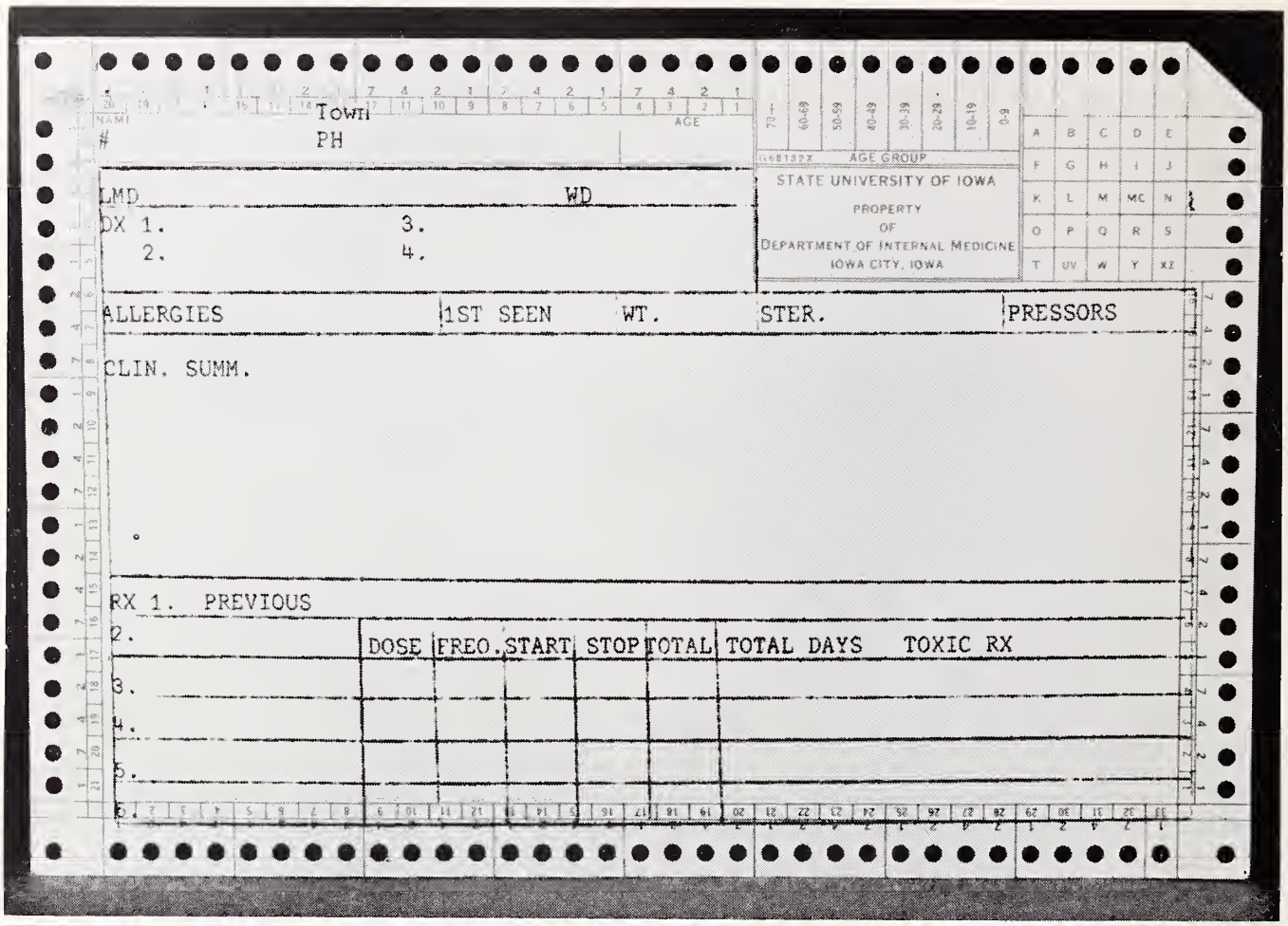
There is a need to advise the manufacturer how best to educate physicians in the practical use of antibiotics. Infectious-disease conferences (Lederle), specific drug symposia (Bristol), informational journals (Lilly, and Smith, Kline & French, and Parke, Davis), movies,[22] and pamphlets (Ayerst) have been very useful. Profession-wide marketings of persuasive, multicolored products for which the sales offices of the manufacturers have been to blame, and injudicious overselling by a minority of the detail men have had deleterious effects.

It has been calculated that it has taken an average of 5½ years and $2,099,000 to market a new drug. Preliminary laboratory work has cost $350,000; clinical testing, $735,000; and various other steps from FDA application until approval, $1,014,000.* These substantial investments have led in the past, and will lead in the future, to the development of new drugs of inestimable value to human welfare. Continued cooperation between the pharmaceutical industry and the universities can lead to great advances in the treatment of infections.

UNIVERSITY HOSPITAL ACTIVITIES AND RESPONSIBILITIES

The university investigators' responsibilities to the manufacturer includes informed opinion regarding the need for antibiotics of certain specifications, an estimate about the place that the antibiotic being tested can be expected to have in the

* From the statement of Walter A. Munns, president of Smith, Kline & French Laboratories, before the subcommittee on patents, trademarks and copyrights of the Judiciary Committee, U. S. Senate, August 19, 1965.



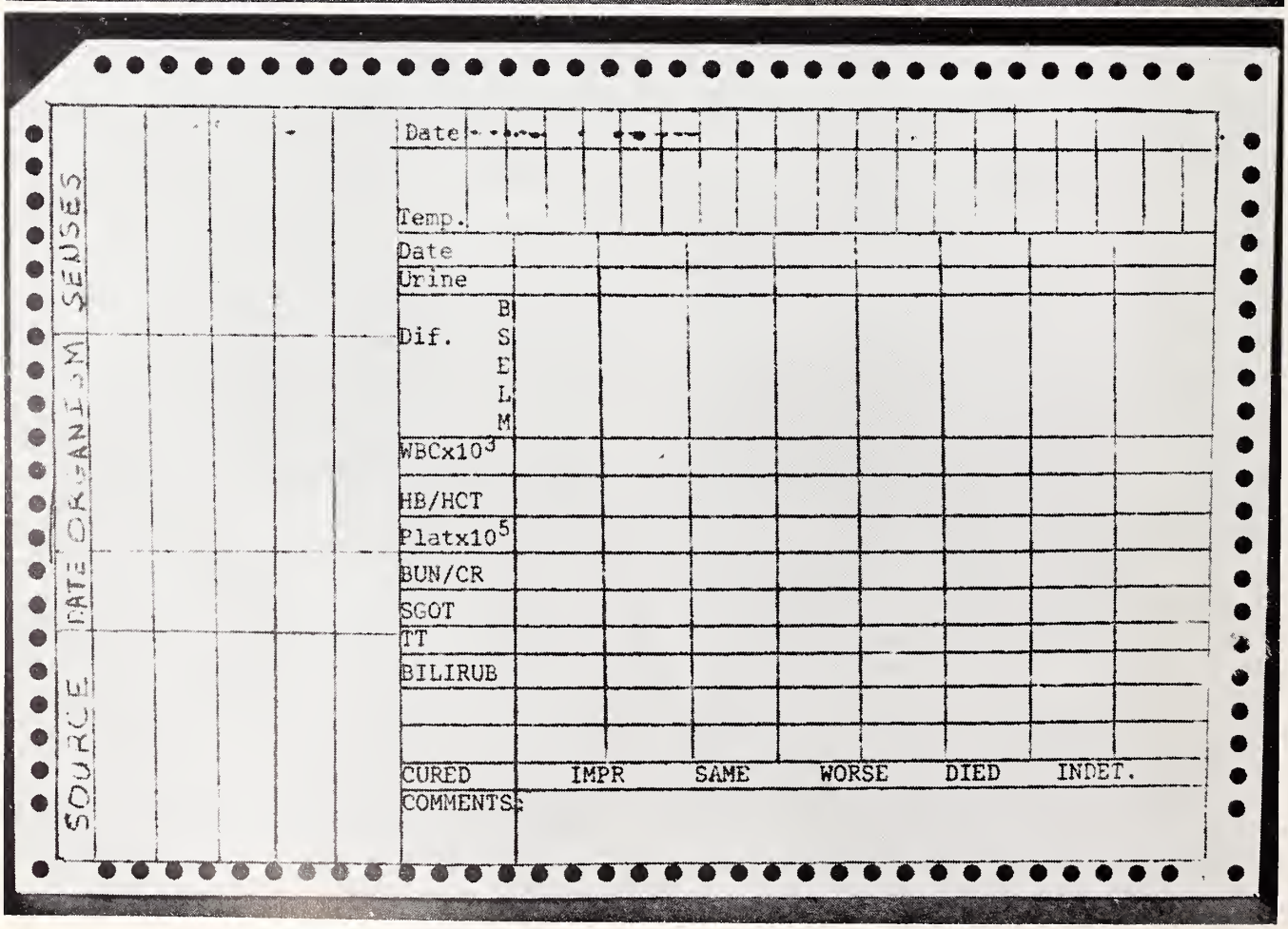


Figure 1. Investigation report form used at University of Iowa Hospitals.

armamentarium of the practicing doctor, and assistance in deciding whether the drug should be marketed or whether further trials should be abandoned. The safety of patients and volunteers utilized in the trials, and the safety of patients to whom the drug will be given after FDA approval are in the hands of the clinical investigator. For these obvious reasons, antibiotic trials must be well designed and meticulously executed.

We have frequently obtained help from other departments of the University of Iowa. Members of the Department of Pharmacology have advised us on the inter-relationship of drugs,[5] i.e., how antibiotic efficacy and toxicity, or both, can be affected by concomitant or prior use of other drugs. They have also advised us on structural indications of possible action. Members of the Pharmacy Department have helped us with preparation of special fluids for administration and on the compatibility of mixtures. They also organize the storage and distribution of study drugs by prescription. Members of the Department of Microbiology have helped us in *in vitro* testing beyond the initial tube sensitivity testing stage. Statisticians have advised us on the effectiveness of treatments in mice. Other departments are available to help us with new problems as they arise. Such assistance often is unavailable in non-university community hospitals.

From time to time, there is a need for reviews of the prevalence of disease in a hospital,[6, 8] of the extent or severity of a contagion, or of the efficacy of treatment for a particular disease.[10, 18, 26] Information gained from these studies helps to guide the manufacturer in determining the need for new antibiotics, or in identifying the antibiotics that are worth chemical manipulation to improve their performances.

Certain legal and ethical problems have been ably discussed by Schreiner:[13] "The primary purpose of clinical investigation is to obtain scientifically reliable data. A clinical investigator walks where others fear to tread, works in a difficult area and must take full responsibility for his professional decisions. . . . Most reasonable clinical investigators can develop personal codes in general agreement with such widely accepted criteria as the moral law, the Nuremberg Code and the ethical principles of the American Medical Association."

In an *initial assessment* at University Hospitals, we screen the compound for its effectiveness in the test tube against a variety of organisms isolated in the diagnostic laboratory. We do this by adding suitable suspensions of the organisms to falling dilutions of the antibiotic. The first tube to be clear after an overnight incubation indicates the bacteriostatic level or minimal inhibiting concentration (M.I.C.) of the antibiotic for that organism (Figure 2). Subculture of all the clear tubes and reincubation then indicate the bactericidal level. If the two levels are similar, the antibiotic is considered bactericidal.

A more effective assessment is obtained by testing the dilution of a volunteer's serum (one hour after he has received the drug) which will inhibit or kill the test organisms. We may confirm the effectiveness in mice, or see whether the drug is particularly suitable for certain regional infections such as pyogenic hepatitis or meningitis (Table 2 and Figure 3). In the past, we have established model infections to test antibiotics.[15, 27] It must be remembered that well-substantiated studies have shown that the modes of detoxification of a compound may differ widely in animals and in man. All these studies, nonetheless, are preliminaries to our main task—that of testing the new drug in sick patients.

Drug testing has an educational function for residents and students. The program shows them the need for careful record-keeping, accurate observation and minimization of the risk that every drug-treatment program carries. It also teaches them how they should assess the claims made for the new drugs that will be introduced after they

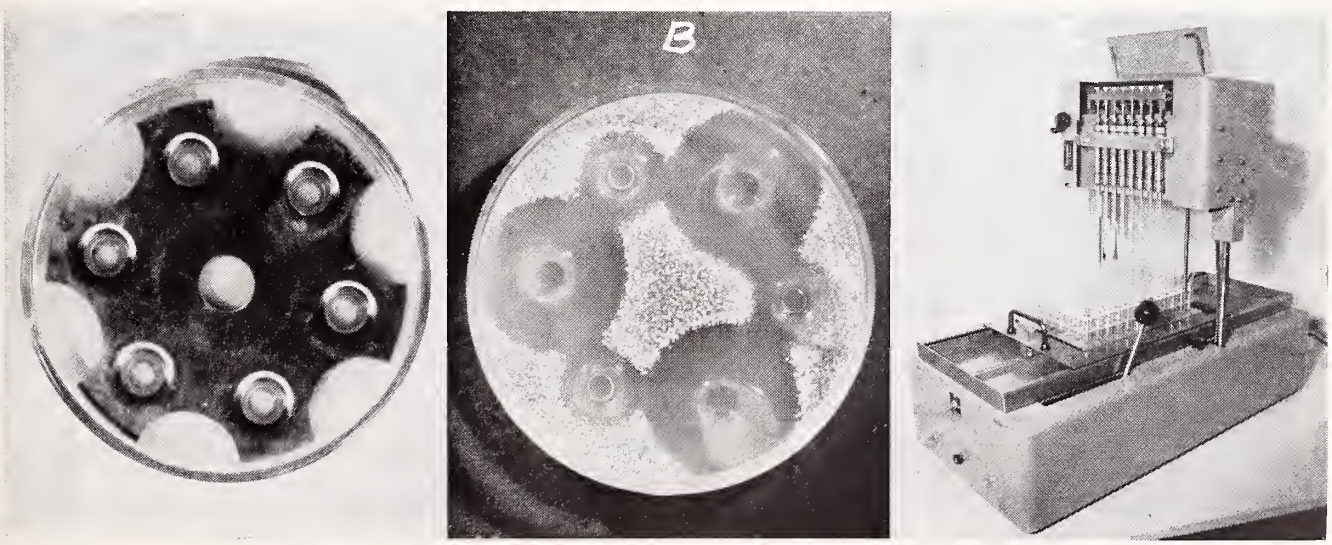


Figure 2. (A) Template method for cup formation in agar plate. (B) Inhibition of growth of indicator organism by drug standard and fluid with drug to be estimated in alternate cups. (C) Automated diluting apparatus for tube dilution method for Minimal Inhibitor Concentrations or measurement of antibiotic levels in serum.

have graduated from medical school or after they have finished their postgraduate hospital training.

DETERMINING THE BENEFIT TO THE PATIENT

In our trials on human beings, we begin by giving small doses to volunteers with inoperable cancer and infection. If no deleterious effects are observed clinically or by test, we continue the same doses over a period of days in the same volunteers and in similar patients, and increase the dose level and frequency to a suitable therapeutic level. Next, we treat volunteer patients who have minor infections that *in vitro* testing has indicated may be amenable to the drug. If our belief in its therapeutic efficacy has been misplaced, no great harm will have been done. At this point, the dose may again be adjusted.

TABLE 2

MICROGRAMS OF PENICILLIN PER MOUSE ORGAN

	Minutes After 100 mg./Kg. I.M.			
	1	30	60	90
Liver Penicillin G	2	24	9	9
Oxacillin	13	36	30	25
Kidneys Penicillin G	0	7	4	4
Oxacillin	4	24	7	3
Lungs Penicillin G	0	6	0	0
Oxacillin	0	2	0	0
Brain Penicillin G	3	0	0	0
Oxacillin	0	0	0	0
Intestine Penicillin G	0	29	10	0
Oxacillin	2	26	21	11

The effective dose is best gauged by studies of drug levels. Volunteers for the levels tests should be intelligent young men, or unmarried or postmenopausal women, who understand the nature of the risk they take, and should be paid for their time and effort. Assessments can be made of the absorption of the drug into the blood stream, of the effectiveness of the serum against pathogens, of the bactericidal activity and of the antibiotic content of the urine. An example of such a study with various dosage forms of ampicillin is shown in Figure 4.

The major part of the trial consists of the treatment of acute infections in volunteer patients. Ideally these patients should be newly infected and untreated, but inevitably some of them have been sick for several days or weeks. The number of patients whom other antibiotics have failed to cure and who are successfully treated with the trial drug is one measure of the new medication's efficacy. Patients are accepted only if the proper diagnostic tests and cultures have been made. Initially, however, we are dealing with an unknown situation, and the choice between the test drug and an established antibiotic may be difficult. We assess the patient's response, fever, temperature, white-cell count, sputum quantity, x-ray changes, culture results and the resolution of any visible lesions. Coincidentally, the levels in organs, milk, joints, cerebrospinal fluid, bile or

Number of Significant Experiments / Number of Nonsignificant Experiments		100 mgm/K			200 mgm/K		
		Pen G	P - 12	Methicillin	Pen G	P - 12	Methicillin
Sensitive	IC	2 / 1	2 / 1	1 / 2	2 / 1	2 / 1	1 / 2
	IP	2 / 1	1 / 2	0 / 3	3 / 0	1 / 2	1 / 2
Resistant	IC	0 / 3	1 / 2	1 / 2	0 / 1	1 / 0	0 / 1
	IP	0 / 3	1 / 2	1 / 2	0 / 1	0 / 1	0 / 1

Significant at .05 level or less when experiments in box are combined.

Figure 3. Testing different dosages of an antibiotic for efficacy in intracerebral infections in mice. (P-12 is oxacillin.)

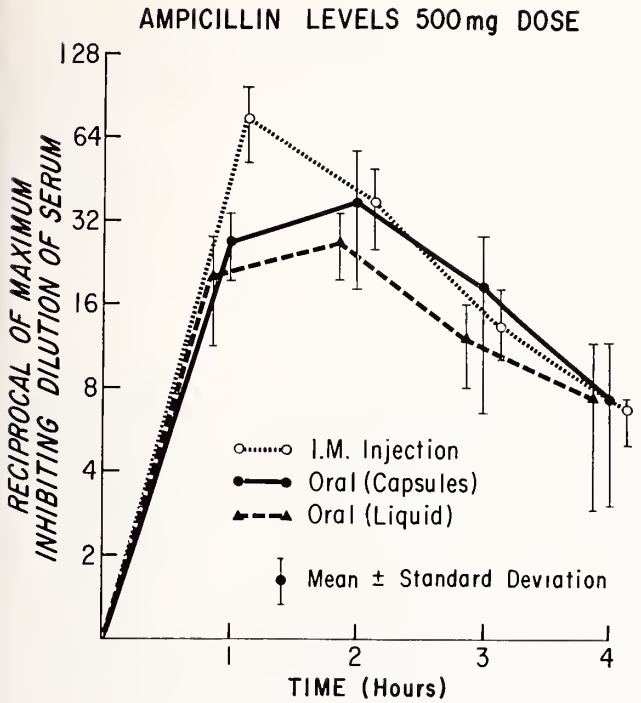


Figure 4. Antibiotic levels in volunteers.

other areas can be made if appropriate tests, biopsies or operations are needed in these patients. Nevertheless, the final assessment of "Cured," "Improved" or "No Effect" is essentially clinical.

We like to have adequate numbers of patients with septicemia, pneumonia and pyelonephritis. The fatality rates from untreated septicemias are 60-70 per cent, and those from pneumococcal pneumonias in young adults are 10-30 per cent, and in patients over 50 years of age 50-70 per cent. Consequently, in such individuals, assessments of effectiveness are not usually difficult. The development of drug resistance *in vivo* can often be observed in these trials, and it can be confirmed in mice or *in vitro*.[9]

Whether or not to undertake double-blind trials is a question that involves some ethical considerations. We must remember that if a moderately good standard therapy is already available for a major disease, a trial with a placebo probably is ethically objectionable. Moreover, since we deal with acute illnesses where assessments of results are often in doubt, we must heed the warning that Marks[7] has voiced: "Let us not worship blindly in medicine at the shrine of the controlled trials and placebos. Let us recognize that they have their place and value, but only when such trials are carefully planned. Let us not replace valuable clinical observations by a series of mathematical symbols." In certain situations double blind studies can be made in comparison to an established treatment rather than to a placebo.

Placebos can be very helpful where a treatment or preventive is being used for a disease that as yet has no effective control. At present, we are carrying out a double-blind trial of amantadine as a preventive for influenza in volunteers at the penitentiary.

In any study involving patients, observer error is an everpresent worry. The patients are visited daily by their own physicians, and regularly by the physicians of the Infectious Disease Service. Each keeps separate records. We try to avoid significant omissions by using all of the independent assessments.

The patients available early in the trial are usually the therapeutic failures—the patients with pneumonias or septicemias complicating neoplasms. As physicians see good results in these difficult patients, they are increasingly inclined to suggest the new agent as a treatment for patients with less complex infections. We have learned, however, that patients with certain infections are best excluded from trials because of their notorious tendency to relapse. Patients with osteomyelitis and those with pyelonephritis complicated by urinary-tract obstruction fall into this category. Careful studies with long-term follow-ups can be designed, however, to study osteomyelitis.[24]

Studies of patients in university hospitals have certain inherent advantages for these trials. The diseases are well recorded, diagnoses are checked many times, bacteriologic tests are exact, and follow-ups are complete. Infectious diseases are often short, well-defined and serious, and they are accurately gauged as to recovery or complicating side-effects. The types of patients seen in university hospitals, however, present certain undeniable disadvantages. Many are elderly, and many have severe underlying diseases. Dropouts occur and must be accounted for. Some are lost because referring physicians add concomitant antibiotics. Others are lost because the culture results have indicated that a better antibiotic is available, and some are lost because of intolerance to the drug.

Because there are inadequate numbers of inpatients for studies of the drugs that need evaluation, we use volunteers in both the ward and the private areas. Other suitable patients can be found in outpatient settings, if FDA acceptance can be obtained. Riboflavin can be added to the capsules and tablets, and urinary fluorescence can be used as a guide to patient-cooperation in the drug trial. Tablet counts or weighing of the medication bottle can also be used to control the intake of the drug. Previous trial-failures or potential defaulters such as alcoholics and "medical shoppers" can be avoided. Phone communication can be maintained as a means of checking on the nature of side-effects in outpatients, and the vast majority of the patients can come to the clinic within an hour or two, by car. We are developing an out clinic for the proper care of chronic infections. A comparison between the types of individuals seen as inpatients and as outpatients is shown in Table 3.

DETERMINING THE RISK TO THE PATIENT

We watch our patients for evidence of local pain, inflammation or phlebitis, and for the de-

TABLE 3
TYPES OF INFECTIONS SEEN

First column: In hospital medical service (our medical service experience 1964-65).
Second column: In practice (1,000 patients) or (?) out-patient clinics (Ref. 4).

Pneumonia	121	70	Follicular tonsillitis	0	84
Pleural effusion	8	0	Common cold	0	79
Pleuritis	0	7	Herpangina	0	2
Empyema	8	0	Sinusitis	0	9
Lung abscess	11	0	Otitis externa	0	2
"Influenza"	0	148	Otitis media	0	2
Bronchitis	10	25	Meningitis	5	1
Bronchiectasis	8	1	Osteomyelitis	12	0
Emphysema and infection	10	0	Bone and joint tuberculosis	3	0
Pulmonary tuberculosis	28	0	Septic arthritis	7	0
Respiratory fungus disease	7	0	Cellulitis	11	3
Respiratory system, other	18	0	Abscesses	9	4
Bacterial endocarditis	22	0	Boils	8	1
Septicemia	52	0	Skin, other	3	12
Pericarditis	5	1	Foot infection, diabetes	5	0
Acute rheumatic fever	3	1	Fever of unknown origin	32	0
Cardiovascular system, other	2	3	Fever in cancer patients	29	0
Gastroenteritis	0	67	Infections, other	27	8
Hepatitis	13	1	Rare infections	10	0
Gastrointestinal system, other	6	0	Chickenpox	0	2
Acute pyelonephritis	13	23	Rubella	0	1
Chronic pyelonephritis	46		Mumps	0	2
Acute glomerulonephritis	5	0	Infectious mononucleosis	0	2
Genitourinary system, other	3	0	Total	568	561

TABLE 4

Toxicity	Effect	Screening Tests	Example
Local	Pain	Observation	Cephalothin (mild)
	Inflammation and plebitis	Observation	Vancomycin
General	Renal	Urine BUN	Gentamycin Methacillin Cephaloridine
	Hepatic	SGOT, TT.+	Intravenous tetracyclines
	Haemopoietic	Blood counts+	Chloramphenicol
	Skin	Observation	All the penicillins Novobiocin
	Ototoxicity	Observation and test when indicated	Kanamycin Gentamycin
	Mental and neurological	Observation	
	Allergy	Observation	Penicillins, etc
	Superinfection	Culture	High dose or mixed antibiotics
	Diarrhea	Observation	Lincomycin
Overdosage	Various	BUN, SGOT and other tests	Kanamycin
Other	Drug addition effects	Observation and chemistries	Dicloxacillin (by protein binding effect)
	New effects as yet undescribed	Observations Incidental chemistries	

+ Biopsy, BSP, blood clotting studies, bone marrow studies, audiometric, caloric and other tests added as indicated.

velopment of rashes (Figure 5). We also watch and test them for side effects that the general medical public may not think of, such as superinfections resulting from the loss of normal flora (Table 5), incidental pharmacologic effects and overdosage resulting either from the testers' limited experience with the drug or from nonexcretion because of minor renal impairment or dehydration.

In a recent extensive review of experimental and chemical aspects of drug toxicities, Zbinden[29] discussed 215 studies involving 21,239 patients, of whom 1,560 (7.3 per cent) had drug-related toxic changes. Some drug reactions appear to result from the particular pathologic conditions of the patients treated. Some drug-related changes are rare and may not become evident until years after the therapy. Table 6 contains some examples of these. Small challenging doses may be necessary to establish certain relationships, but they

Figure 5. Rashes resulting from allergy or idiosyncracy to antibiotics: (A) Methicillin, (B) Chloramphenicol, (C) Lincomycin, (D) Declomycin, (E) Novobiocin, (F) Furadantin.

TABLE 5

SUPERINFECTIONS*

Development of New Organisms in Significant Numbers in the Sputum	% Superinfected†
Penicillin < 2.4 million units daily	0
Penicillin ≥ 10-20 million units daily	29
Tetracycline or chloramphenicol 2 Gm. daily	5
Penicillin < 2.4 million and streptomycin 1-2 Gm. daily	6
Penicillin < 2.4 million plus chloramphenicol or tetracycline 2 Gm. daily	47

* Source: Louria et al., JAMA, 186:987, 1963, and Amer. Rev. Resp. Dis., 85:649, 1962.

† Approximately 29 per cent of bacteriologically superinfected patients develop clinical illness.

must be used with great caution. We have resorted to this testing recently in checking an unusual side effect of a drug[24] because the patient insisted that his rash had been caused by whiskey!

It is important that several different centers be involved in any series of tests. For example, we have detected a side effect that physicians at another center were able to identify as the effect of a complicating pyrogen. Assessments are difficult, and multiple checks add to the accuracy of the evaluation.

Drug interrelationships are often hard to detect. We have seen a sulphonamide enhancing the effect of an oral hypoglycemic agent (sulfonylurea) and leading to hypoglycemia; barbiturates increasing the metabolic inactivation of griseofulvin;[5] and metallic antacids antagonizing the effect of tetracycline. We have been told that sucaryl in Diet Pepsi interferes with lincomycin absorption.

Reports of toxic reactions should be made to the manufacturer, to the FDA and to the AMA Council on Adverse Reactions. All the companies with which we have cooperated have been anxious to have us delineate all drug actions exactly, as a means of safeguarding the welfare of patients who will receive the drug after a license for its release has been obtained.

SYNTHESIS OF KNOWLEDGE

The doctor in practice is faced with a welter of information on new drugs, and it is sometimes difficult for him to correlate it and to compare the new drugs with the older ones. An attempt at this correlation is presented in Table 7. JAMA presents drug monographs from time to time, and these are correlated in the handbook NEW DRUGS. University investigators have a duty to assess recent knowledge, as we have done in the past.[16] Some other people have done this recently in an excellent outline of antibiotic usage that our students and residents highly commend.[2]

TABLE 6

METHICILLIN RENAL TOXICITY

Male: age 52.

2-28-64: Staphylococcus aureus in two blood cultures and sputum culture.

Methicillin treatment: 39 Gm. in seven days. Oxacillin treatment: 88 Gm. in 11 days.

Treatment stopped: 3-24-64.

3-20-64: Two urine cultures, two kidney cultures and five blood cultures sterile.

	BUN (mg. %)	Creatinine (mg. %)
3-20-64	180	11.6
3-28-64	120	5.8
6-15-64	70	3.8
6-2-64	35	2.2
9-8-64	32	0.6

DISCUSSION

There is a great need for groups of hospitals to conduct cooperative antibiotic trials. The Infectious Disease Society of America, or regional groups of hospitals, could do this for the benefit of the patient. Double-blind studies with antibiotics have rarely been undertaken because of the scarcity of patients with identical diagnoses in a single hospital, but several medical staffs, working together, could compare and contrast two or more patent remedies that have already passed the preliminary testing stage.[28]

The problem of late toxicity is everpresent. All practicing physicians share responsibility for reporting any unusual occurrence even remotely related to drug action.

New agents are needed to treat Klebsiella-aerobacter, Proteus and Pseudomonas infections. Treatments are needed for hepatitis and rubella. As new agents become available, the already important need for virus diagnostic facilities will be accentuated. Studies of the natural history of certain virus diseases are needed in preparation for clinical trials of new antiviral compounds. We have done such a study of herpes zoster[25] so as to have a background for the interpretation of later tests of chemotherapeutic agents. The transplacental passage of antibiotics is a subject of great importance, and the treatment of infections in pregnancy requires more study. Amphotericin is effective in several disseminated fungal illnesses, but we have a great need for other agents in this field.

There is a great need for trained investigators who understand infectious diseases and are familiar with the procedures for making clinical trials of new therapeutic agents. Just as fundamental laboratory studies should not be weakened by monopolistic support, so trainee programs should be shared among the government, the vol-

TABLE 7

THE ANTIBIOTICS† CURRENTLY AVAILABLE

Antibacterial compounds:

Group I

Organisms which respond to Penicillin G—Pneumococci, Beta hemolytic streptococci, gonococci and spirochetes.

Group II

Antistaphylococcal antibiotics—Seriously ill: Methicillin, Oxacillin, Nafcillin, Vancomycin and Penicillin G. All others: Erythromycin, Lincomycin, Novobiocin, Oleandomycin, Penicillin G. Seriously ill allergic to penicillin: Cephalothin.

Group III

Drugs to treat Gram-negative infections—Serious infections: Tetracycline, Streptomycin, Chloramphenicol, Ampicillin, Kanamycin, Colistin. Others: Cephalothin, Sulfas, Penicillin G, Nitrofurantoin,* Nalidixic Acid.*

Group IV

Resistant Gram-negative bacilli—Proteus: Kanamycin, Tetracycline or Chloramphenicol by test. P. mirabilis also Penicillin G, Ampicillin, and Cephalothin. Pseudomonas aeruginosa: Colistin (Polymyxin E), Streptomycin, Kanamycin, Sulfa and acid pH. Klebsiella-aerobacter: Colistin, Streptomycin, Tetracycline, Choramphenicol, Kanamycin by test.

Antiviral Compounds:

Sulfas and Tetracycline	Trachoma
Interferon+	Vaccina and ? others
Idoxuridine (IDU)	Herpes simplex
Marboran+	Smallpox, vaccinia
Amantadine+	Influenza and rubella

Antifungal Compounds:

Stilbamidine	Blastomycosis
Amphotericin B	Histoplasmosis, coccidioidomycosis and blastomycosis and cryptococcosis candidiasis
Griseofulvin	Tinea corporis, capitis and favus
Iodides	Sporotrichosis

* Urinary tract only.
\+ Still on clinical trial.
† Including certain of chemotherapeutic agents which are not specific.

untary health agencies and the pharmaceutical companies so as to assure good quality and stability.

The perfect antibiotic will probably never be obtained, but we have tried to outline its main properties (Table 8). Nonetheless, it must be a very unusual infection for which one or more antibiotics cannot be found effective, both *in vitro* and *in vivo*.

TABLE 8

IDEAL ANTIBIOTICS

1. Bactericidal.
2. (a) Specific for a single organism. } Both types
   (b) Broad spectrum. } are needed.
3. Non-immunogenic.
4. Non-toxic to human cells or extracellular distribution.
5. Oral administration with high levels.
6. Significant diffusion through normal or pathological barriers.
7. Known chemical formula, distribution and metabolic pathway.
8. Should not induce development of drug-resistant microorganisms.

SUMMARY

"Society must recognize that in its demand for new drugs there is clearly implicit a license for qualified individuals to take certain risks in testing drugs as well as to take calculable risks in using them clinically."[7]

In recent years the practicing physician has received a remarkable number of effective drugs from the pharmaceutical manufacturers. In order to assure safety to the patients, these drugs must be tested carefully before they are released. University Hospitals can give excellent assessments of the benefits for the patient, and can establish the inherent risks of these medications. We have discussed our experience during recent years in testing the antimicrobial activities of 19 agents. It is important for the pharmaceutical manufacturers, the Food and Drug Administration, the United States Public Health Service and other interested groups to give strong financial support to the testing of new chemotherapeutic agents at such institutions as ours. The medical profession and the public should recognize the complexity of these studies and their potential benefits. We have outlined the areas which will need further study and support.

ACKNOWLEDGEMENTS

We wish to thank the various pharmaceutical manufacturers for their continued support of our testing program. Drs. William B. Bean, James R. Fouts, Daniel B. Stone and William R. Wilson and Mr. H. J. Black have helped us greatly with their advice and criticism.

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University of Iowa

College of Medicine

Clinical Pathologic Conference No. 450

SUMMARY OF CLINICAL FINDINGS

A WHITE WOMAN 51 years of age had been well until February, 1962, when she developed increasing fatigability and swelling of the feet. She gave no history of renal infections, hematuria, pyuria, or hypertension. None of her relatives had experienced renal disease or diabetes mellitus. Her attending physician had diagnosed her ailment as nephrotic syndrome, and on two occasions had administered Aldactazide-A (spironalactone and hydrochlorothiazide), producing some temporary lessening of edema. Thereafter, nocturia had occurred six to eight times per night.

She was admitted to the University Hospitals on June 23, 1962, with signs of ascites and edema of the feet, legs, abdominal wall and back. The body temperature was normal. The ocular fundi were normal. The lungs were clear. A cardiac arrhythmia was characterized by groups of three or four fast beats. The blood pressure measured 120/70 mm. Hg. The pelvis was negative. Sustained, bilateral ankle clonus was elicited.

The urine contained a large amount of protein (reported as 4+), and waxy hyaline and occasional granular casts were seen in the sediment. The hemoglobin concentration was 13.9 Gm./100 ml. Leukocytes numbered 7,600/cu. mm., but the differential count was normal. The erythrocyte sedimentation rate was 95 mm./hr. by the Westergren method. The blood BUN, creatinine, and electrolytes were normal, except that serum calcium was 8.8 mg./100 ml.; the serum phosphorus was 5.0 mg./100 ml. The concentration of serum albumin was 1.0 Gm./100 ml., and the serum globulin was 2.6 Gm. The total serum cholesterol was 650 mg. per cent. Ten per cent of intravenously injected bromsulfonphthalein was retained in the blood plasma for 45 minutes. Electrocardiographic findings were reported as compatible with hypocalcemia. In intravenous pyelograms, the dye appeared promptly, but in low concentrations on both sides. Needle biopsy of a kidney revealed arteriosclerosis and glomerulosclerosis, resembling the findings in diabetes mellitus. A glucose-tolerance test, following an oral administration of the sugar, was nor-

mal. Cholecystograms and roentgen examination of the upper gastrointestinal tract were interpreted as normal. On several occasions, the 24-hour urinary output of protein ranged from 7 Gm. to 15 Gm. The patient received prednisone and Aldactone, while on a diet containing 200 mg. of sodium per day. At the time of discharge from the hospital, the patient's body weight had declined from 168 to 130 pounds, and only slight peripheral edema remained. She was to continue the same treatment at home.

On October 8, 1962, the patient reentered the hospital because of nausea, vomiting, and epigastric distress. No hematuria had been noted. The prescribed medication had been continued. Her weight was 129 pounds, and her body temperature was normal. She appeared chronically ill, with moderate distress from abdominal pain. Pitting edema was reported "over the entire body." Examinations of the head, neck, breasts, and lungs were negative. The examiner noted no arrhythmia, but recorded a pulse deficit of 4:3. The blood pressure measured 80/60 mm. Hg. The abdomen was tensely distended, and the liver margin was felt two fingerbreadths below the right costal margin. Some tenderness could be elicited in the epigastrium. The bowel sounds were normal. No ankle clonus was present.

The hemoglobin concentration was 13.4 Gm./100 ml. The initial leukocyte counts and their proportionate distributions were normal, except for a count of 19,500/cu. mm. on November 2, 1962. The erythrocyte sedimentation rate was 99 mm./hr. by the Westergren method. The urine contained 4+ protein and waxy and hyaline casts. During her stay in the hospital, her BUN increased from 14 to 23 mg./100 ml., and her creatinine rose from 1.3 to 2.0 mg. The serum albumin was 0.8 Gm./100 ml.; the serum globulin was 1.9 Gm.; the total serum cholesterol was 996 mg. per cent. On admission, the serum electrolytes were: Na 134 mEq./L.; K 5.9 mEq.; Cl 98 mEq.; and the CO_2 was 22.1 mEq./L. Terminally, the values were: Na 122 mEq.; K 3.3 mEq.; Cl 87 mEq.; CO_2 18.3 mEq.; Ca 8.2 mg./100 ml., and P 6.8 mg. A roentgenogram of the chest was interpreted as showing bilateral pleural effusion with basilar atelectasis. A barium swallow was interpreted as showing the crater of an ulcer on the lesser curvature of the gastric antrum. Gastroscopy with cytologic examination revealed no malignancy. A later roentgen examination demonstrated healing of the ulcer. A duodenal biopsy revealed normal mucosa and submucosa.

During her three months of hospitalization, the patient's condition worsened. She was given prednisone and Aldactone during the first two months. Her appetite failed, requiring the intravenous administration of fluids. After intermittent hematuria for three or four days, anuria occurred and persisted for her last 72 hours of life. She died on January 9, 1963.

CLINICAL DISCUSSION

Dr. R. F. Sheets, Internal Medicine: CPC No. 450 is "the case of the swollen woman." Mr. Gitchell will discuss it for the students.

Mr. R. Gitchell, junior ward clerk: A 51-year-old white woman was well until February, 1962. After the onset of her symptoms, she lived only 11 months. My colleagues and I feel that she had signs, symptoms, and laboratory findings compatible with the nephrotic syndrome. Terminally, she probably developed renal failure.

Her ailment probably was nephrotic syndrome of unknown etiology. We believe the histologic picture may have been mixed, proliferative and membranous glomerulonephritis, and our reasons are: (1) the rather rapid downhill course of her disease, and (2) its apparent poor response to steroid therapy. However other histologic lesions could have produced the same refractory course.

A British medical group has reported on a series of patients with membranous glomerulonephritis and secondary hypoparathyroidism. This possibility, along with the low serum protein, may explain our patient's clinical hypocalcemia and her phosphorus levels. We believe the elevation of her erythrocyte sedimentation rate was due to her low serum albumin and her disease state. We think the biopsy findings at the time of her first admission were consistent with our diagnosis.

Even though we are told of no antecedent history of sore throat or other infection, we cannot rule out the possibility of poststreptococcal subacute glomerulonephritis as a cause for the nephrotic syndrome. The protocol makes no mention of a lupus erythematosus preparation, so we must consider that, too. The factors against it are: (1) the characteristic wire-loop lesions that occur in active lupus glomerulonephritis were not seen at biopsy, and (2) in the type called membranous lupus glomerulonephritis, which is difficult to distinguish morphologically from membranous glomerulonephritis of unknown etiology, steroid therapy is fairly effective in producing remission. Drugs and toxins cannot be overlooked, because even such common things as poison oak and bee stings have been implicated. Diffuse glomerulosclerosis cannot be ruled out, though in our patient's case it would have to have been present in a nondiabetic or a very early diabetic. Statistically, however, that condition is rare. Her history is not consistent with bilateral renal vein thrombosis. Amyloidosis cannot be ruled out, but no mention was made of amyloid in the biopsy report. No history of secondary syphilis was given.

Playing the percentages, we feel that this was a nephrotic syndrome of unknown etiology, with the possible histologic picture of mixed, proliferative, membranous glomerulonephritis.

Dr. Sheets: Do you have any questions for Mr. Gitchell? An L-E prep, about one month after admission, was negative.

Dr. Seebohm will discuss this case for the staff.

Dr. Paul M. Seebohm, Internal Medicine: The first question we might ask is, "Did this patient have a nephrotic syndrome to explain the edema?" I certainly would agree with the students that the clinical characteristics of hypoalbuminemia, albuminuria, and soft edema suggest that the patient did have a nephrotic syndrome to account for the edema, rather than some other condition such as heart failure or some type of generalized allergic reaction such as a bee-sting reaction.

The next serious question is, "What type of nephrotic syndrome was this?" There was no elevation of the blood pressure, and early in the course of her illness there were no significant signs of renal failure. Thus it looked as if she had defective glomeruli. If the albumin were leaking out of the kidney at the rate of about 9 or 10 Gm./day, that loss could produce a fall in plasma albumin. Such a reduction reduces the osmotic pressure and could account for some of the exudation of fluid into the tissues. With this phenomenon, we often have an increase in aldosterone secretion, and a retention of sodium and water to account for the massive edema.

The next question one should ask is, "Are you sure that this was an idiopathic type of nephrosis, or was it secondary to some basic renal lesion?" Some of these possibilities have been mentioned by the students, but I should like to comment upon them too. In view of the patient's negative history, the condition obviously had an insidious onset. On clinical grounds alone, the negative history—no elevation of the blood pressure, sore throat, or other signs of a glomerulonephritis such as hematuria—suggests that her illness was not a manifestation of chronic glomerulonephritis. Amyloidosis could have produced that type of syndrome, but of course it was not reported in the biopsy. But even without the biopsy, I should say that the failure of the globulins to increase constituted evidence that it was not amyloidosis. I think the same would apply to lupus erythematosus, where the globulins are likely to be increased, mainly the macroglobulins. Secondary syphilis, I think, could better be ruled out by a Wassermann test than by the fact that there was no history of syphilis. I suspect that one was done and that it was negative. If a report of it was withheld because it was positive, and if the patient really had a syphilitic nephrosis, was treated with penicillin and so on, then this whole Conference is a fraud. The possibility should be considered that the patient was taking some kind of drug that could produce the nephrotic syndrome, one like trimethadione which can cause a nephrosis similar to those seen in other conditions. But this is unlikely, since it was not mentioned in the record.

Constrictive pericarditis needs to be considered, and I think at this point it would be appropriate to have Dr. Keller show the chest x-rays.

Dr. J. T. Keller, Radiology: This film, taken on August 9, 1962, showed a bilateral pleural effusion. The heart was not enlarged, and the pulmonary vasculature was shown to be within normal limits. Another x-ray was taken three weeks later. It showed a considerable increase in the amount of pleural fluid bilaterally. The heart still was not enlarged, and the vasculature was still within normal limits. A month later, there was little change. Bilateral fluid was still present, but I believe it had decreased somewhat since the previous film. The heart showed a slight enlargement over the previous examination. The fourth chest film is the last we have on the patient. Again, it showed a little improvement in the right base. The amount of fluid on the left was somewhat increased, and there was a small amount of linear atelectasis at this point and in the right base as well. The cardiac silhouette in the last film was about the same as in the previous one, where it was within the upper limits of normal.

Dr. Seebohm: Can you see anything on these x-rays to suggest constrictive pericarditis, or do you ever see anything on x-rays that would suggest that diagnosis?

Dr. Keller: Many times, in constrictive pericarditis, one can see some calcification in the pericardium. In this case I didn't see any, and I believe that the heart in general was within normal limits.

Dr. Seebohm: Certainly the edema that one sees in constrictive pericarditis simulates that which he sees in patients with the nephrotic syndrome. Generally speaking, however, the degree of reduction in the plasma albumin is less, and the albuminuria seems to be somewhat less, too. There is nothing to go along with severe congestive heart failure as an explanation. One other point: The Congo-red test is usually performed on patients suspected of having amyloidosis. We might ask for that report at this time.

Dr. Sheets: The Congo-red test was not done.

Dr. Seebohm: Up to this point, on clinical grounds, there is only one thing wrong with the diagnosis of idiopathic nephrosis or idiopathic nephrotic syndrome. The biopsy, as reported in the protocol, suggested that there was glomerulosclerosis, and we are told that it was consistent with the kind of lesion seen in Kimmelsteil-Wilson's disease in association with diabetes. If that report were to stand as given, then that type of lesion, of course, could explain the phenomenon. I am inclined to suspect, however, that we'll have some electron microscopy findings, both before death and after, to amplify that pathologic description. And should the lesion not be typical of Kimmelsteil-Wilson's disease—which is very hard to substantiate on clinical grounds, inasmuch as the patient showed no signs whatsoever of disordered carbohydrate metabolism—then we'll be stuck with idiopathic nephrosis, a condition in which time is

of special interest at the present because it seems possibly related to some type of hypersensitivity phenomena.

I do not want to go into this at great length, except to say that it is not possible clinically to differentiate the foot-process type of this condition from the membranous type. The findings seem to be very much the same, and one has to rely upon the pathologic tissue examination to make the distinction. There are good reasons for suspecting that this condition was a hypersensitivity phenomenon. In animals there are numerous experimental models of the nephrotic-like syndrome resulting from injections of kidney-tissue extracts. Probably the best example has been established in the rat. Masugi, and later Smadel, were able to produce it with passive transfer technics, where the phenomenon developed within a few hours after the antikidney sera were injected into the rat. Previous experiments required four or five days, opening the possibility for another mechanism. For example, hypersensitivity to the injected serum may have developed, and the complexes themselves may have produced injury to the glomerulus. Foreign-protein nephritis from horse serum and bovine albumin is a type that probably follows this sort of mechanism. The antibody is not to the kidney itself but to another protein, in the antigen-antibody complex, which collects in the kidney and injures it.

Chemicals occasionally injure the basement membrane. Aminonucleoside and uranium salts have produced nephrotic-like pictures. These phenomena have been known for a long time. Now the question is, "Does this ever occur in man?" The evidence in man is much less direct. Some investigators have found antibodies to the kidney, and some have not. The hemagglutinating type of tanned red cell technic has been used.

The response to steroids, of course, has been suggested as evidence that this is a hypersensitivity phenomenon. Generally, I think, that is a weak argument. This is poor evidence of allergy, since steroids, as they usually are administered to people, do not affect antibodies quantitatively, seeming to affect the tissue reaction rather than the antibody production. Our patient's clinical story contained nothing to make one suspect that there was any allergy involved. Rather, I think, idiopathic nephrosis remains our best explanation.

She was given steroids, Aldactone and a low-salt diet, and she came back to the hospital with abdominal distress. I think it might be appropriate at this time to take a look at the x-rays of her gastrointestinal tract, which according to the protocol, showed an ulcer.

Dr. Keller: This film was taken on October 11, and showed a crater on the lesser curvature in the anterior region. X-rays taken five weeks later no longer showed the lesion, and we believe it had healed in the interim.

Dr. Seebohm: Again, looking for the simple way out, I shall take the position that the patient's ulcer resulted somehow or other from the steroid therapy, and that when she was put on an antiulcer regime, it healed without any complications. One part of her course disturbed me—the degree of hypocalcemia present. I must say I didn't handle this very well in my own mind. There was supposed to be some electrocardiographic evidence of it, and I presume it consisted of a long S-T interval and some change in the T wave. The reason for my difficulty was that I held the opinion that phosphorus goes up and calcium goes down in renal disease only after the degree of renal insufficiency has reached a greater magnitude than was indicated in this protocol. The patient's BUN was only 23 mg. BUN is a pretty good index of renal failure when it is down in that range, and her creatinine was only 2. Nevertheless, I must fall back on renal failure as an explanation for that low value. Another explanation would be that the albumin was too low to hold the calcium in the blood. However, since this phenomenon affects only the protein-bound calcium and not the ionized, it fully explains neither the electrocardiographic changes due to the low calcium, nor the ankle clonus which had been noted early and which one might think was due to the same change.

My final opinion is that this really was a case of idiopathic nephrosis, and now that the pathologists have obtained bigger pieces of tissue for examination and for electron microscopy, they will have come to some decision as to whether it was of the foot-process or of the membranous type.

Dr. Sheets: The two serologic tests for syphilis were negative.

Dr. E. L. DeGowin, Internal Medicine: Did this patient get any diuretics such as chlorothiazide with potassium supplement?

Dr. Sheets: Yes, she had Aldactone and chlorothiazide in a combination. She had other diuretics at different times.

Dr. DeGowin: The ulcer may have been caused by the ingestion of potassium chloride.

Dr. W. R. Wilson, Internal Medicine: Such ulcers do not occur in the stomach. They usually are seen in the ileum or jejunum.

Dr. Sheets: Do you want to make any comment about the calcium and albumin at this point, Dr. Mason?

Dr. E. E. Mason, Surgery: I was interested in this patient because of the almost complete absence of serum albumin, and I looked up Bennhold and Kallee's work on analbuminemia.[1] Five other patients have been described who either were born with a deficiency for making albumin or acquired that deficiency. We have been in the habit of explaining low-albumin edema as an inability of the plasma to hold water because of an inadequate colloid osmotic pressure, but it is interesting

that these patients with no albumin have no edema, except occasionally a little in their feet. It is also of interest that their serum cholesterol levels are very high and that infusions of albumin cause the serum cholesterol to decrease. Montgomery, Neill, and Dowdle[2] have said that one of their patients had a serum calcium of 7.8 mg. per cent, which is about what our patient had. Hanna, Nicholas, and Chamberlain[3] presented a nomogram which shows the diffusible calcium when one knows the albumin, globulin, and total calcium. Our patient's values for albumin were so low as to fall below the nomogram, but extrapolating a little, I should say that her serum calcium level was probably normal.

Dr. Sheets: Dr. Seebohm, why do you think this patient died?

Dr. Seebohm: I was very much interested in the cause of death in this case. The protocol really fails to give an outsider an opportunity to determine the cause of death. It says, for example, that during the three months of hospitalization, the patient's condition worsened, and then she died. That really doesn't give one very much to go on. It would be nice to know whether she had a terminal fever. Patients with nephrosis, of course, have a disordered glomerulus. Although the children seem to improve, among adults the history is not always so favorable. If the glomeruli finally break down and close off, the patient can die from renal insufficiency. Our patient certainly developed signs of this when she had hematuria and then terminal anuria. Why one dies at that point —if these are the final electrolyte values—is not obvious to me. The final electrolyte values, however, were not made when the patient was anuric. If they had been, they might have revealed an elevated potassium.

Dr. Sheets: Dr. Davis, do you want to tell us what was found at autopsy?

Dr. J. R. Davis, Pathology: At necropsy, there was anasarca with both pedal and presacral subcutaneous edema, 4 liters of ascitic fluid, and 0.8 and 1.4 liters of hydrothorax, right and left respectively. The organs were normal in size, shape, and relationship. The heart weighed 240 Gm. and was at the upper limits of normal. The spleen weighed 120 Gm. and contained a red, waxy, translucent alteration-obliterating malpighian bodies. The kidneys weighed 140 Gm. right, and 150 Gm. left. The renal cortex and the columns of Bertin were widened, yellow, waxy, and translucent. This alteration shone through the smooth capsular surface and produced irregularity of the corticomedullary junction (Figure 1). The medullary zones were unchanged. A mural thrombus partially occluded the left renal vein.

Suspicions engendered by the gross findings were substantiated by microscopic examination. The basic disease process was primary systemic amyloidosis with severe involvement of kidney

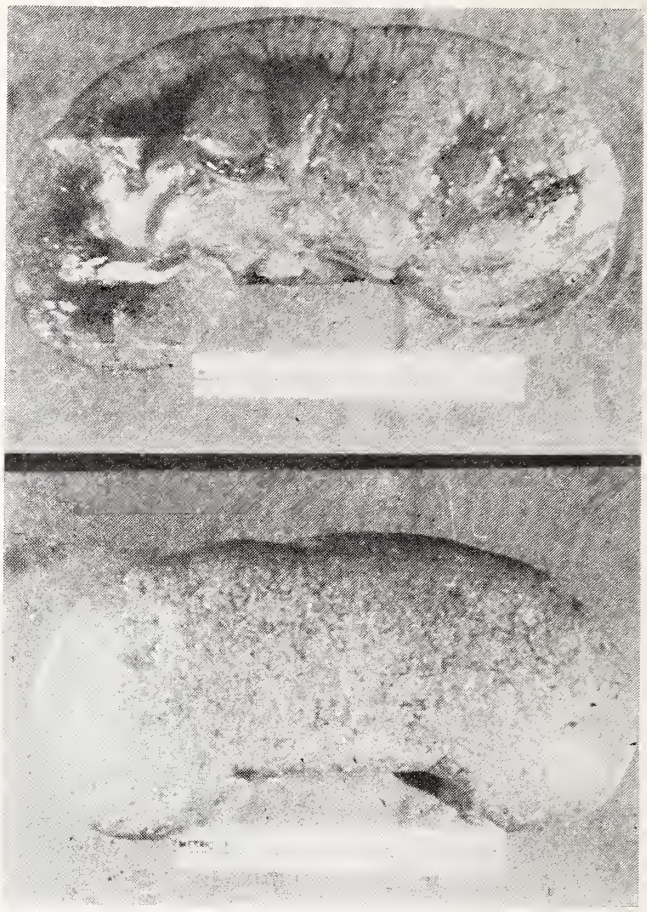

Figure 1. Gross appearance of kidney, showing yellow, waxy amyloid accumulations in cortical tissue. Cut surface above; smooth renal surface below.

and spleen. Moderate amounts of amyloid were present in heart, liver and adrenals, and small amounts in intestinal wall, vessels, and nerves throughout the body and in adipose tissue. The autopsy BUN was 50, and the creatinine 2.7 mg./100 ml. The most likely cause of death was renal failure, perhaps associated with compensated azotemia. Considering myocardial involvement by amyloid, one might speculate that a terminal acute and fatal arrhythmia may have occurred. Incidental findings included chronic thyroiditis, fat necrosis of the tail of the pancreas, mammary dysplasia, patchy pulmonary fibrosis and atelectasis, and a mild degree of generalized atherosclerosis. There was no evidence of either a residual gastric ulcer or a scar from a healed ulcer.

A comparison of the renal biopsy with the autopsy kidney exhibited severe and rapid progression in amyloid involvement of glomeruli (Figure 2). The biopsy depicted a mild, diffuse thickening of the glomerular tuft. Six months later, all glomeruli were nearly filled with the pink, glassy, homogeneous material which represented amyloid. Tufts were distended and glomeruli enlarged. Little involvement of tubular structures and interstitium had occurred. Liver and adrenals exhibited amyloid in association with littoral cells lining the sinusoids. The zonae of the adrenal cortex in-

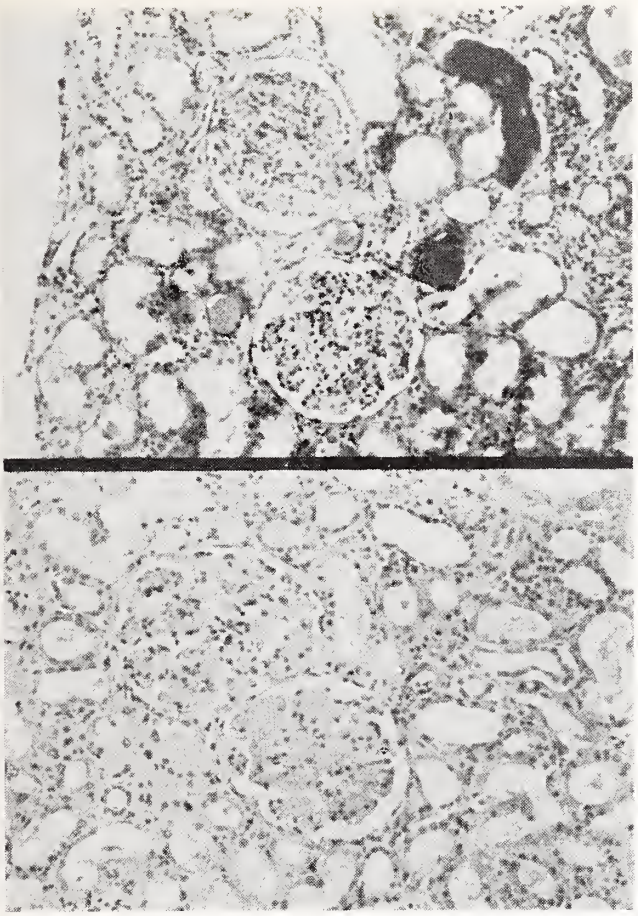

Figure 2. Microscopic appearance of renal cortex showing comparison between renal biopsy (above) and autopsy kidney (below). Severe and rapid progression of the disease occurred.

volved were the reticularis and fasciculata, with sparing of glomerulosa. The bulk of adrenocortical tissue remained. The splenic pattern of involvement was lardaceous. Amyloid constituted the bulk of the red pulp, and there was atrophy of lymphoid tissue around penicillar arterioles. The myocardial involvement was diffuse, interstitial, and light-to-moderate in degree. Nerves in several locations had nodular collections of amyloid within their substance, and small vessels in many sites exhibited amyloid replacing the normal structure of the wall. The adipose tissue was diffusely involved, with thick mantles of amyloid encasing individual fat cells. There was no conspicuous plasmocytosis in extramedullary sites. The bone marrow did exhibit a moderate degree of reactive plasmocytosis.

Microscopic examination of the left renal-vein thrombus revealed early organization and recanalization. Zones of laminated fibrin remained, and pigment-laden macrophages were present in loose connective tissue and represented the bulk of the clot. It is thought that the nephrotic syndrome in this patient antedated the occurrence of thrombosis. Spontaneous renal-vein thrombosis in adults is infrequent in the absence of intrinsic renal disease or neoplasia, but is not infrequent as a terminal complication of multisystemic and renal amyloidosis.[4] The thrombus was regarded as secondary to amyloidosis in this case.

Until recently, we had very little in the way of special investigative technics to assist us in the diagnosis of amyloidosis. Two valuable adjuncts in this effort are the polarizing microscope and the electron microscope. When amyloid is viewed through crossed polarizing prisms, it has a unique green birefringence. The evaluation can be done on either Congo-red stained sections or on ones stained with hematoxylin-eosin, heavy on the eosin. The usual polarizing filters are not suitable for this examination. Amyloid's green birefringence resembles the familiar apple-green fluorescence of fluorescein in ultra-violet microscopy, but the property of birefringence is not the same. The anisotropism of amyloid occurs parallel to the long axis of the material. In a large accumulation of amyloid, portions of it will exhibit green birefringence, and the rest none. But if the stage of the microscope is rotated, more green birefringence appears, and that previously seen is quenched. Currently the polarizing microscope is considered one of the most reliable means of identifying amyloid. Additionally, by that means, one can detect small amounts of amyloid which might be missed in ordinary microscopy. For example, no amyloid was recognized in the renal biopsy from this patient six months before death. Subsequently, we procured a polarizing microscope and could demonstrate small amounts of amyloid. The observer can differentiate between the green birefringence of amyloid, and the white, pink, or yellow birefringence of collagen and myosin. Further, the technic is a more reliable means of identifying amyloid than reliance on the tinctorial properties of the substance.

The property of green birefringence suggested to investigators that there was an ordered submicroscopic structure in amyloid. Electron microscopy has demonstrated a characteristic fine structure by which amyloid can be identified and studied. Amyloid is composed of fibrils 70-100 Ångstrom units wide, with a beading of 100 Å. All recognized types of amyloid—human and animal, spontaneous, induced, or familial—have this same fine structure.[5] Electron micrographs of this patient's kidney showed masses of fibrillar amyloid, oriented and disarrayed, on the endothelial side of the basement membrane or in mesangium. Epithelial cells exhibited loss or flattening of foot processes. The nearly homogeneous basement membrane was eroded and pierced by amyloid aggregates which were more abundant between the basement membrane and the swollen endothelial cells. This alteration in the renal glomerulus provides the anatomic basis of the nephrotic syndrome that is manifested clinically.[6]

I'd like to comment briefly on the Congo-red

test. Together with biopsy, it has been the conventional way to study amyloid. Care must be given in interpreting the percentage of dye retained after one hour. Sixty or 80 per cent dye retention is often considered the borderline level above which positivity occurs, but even 90 per cent retention gives false negatives in about 25 per cent of cases, and the incidence of false positives is 4 per cent. An occasional false-positive is encountered even with 100 per cent retention. Consequently it is suggested that any finding of less than 90 per cent dye retention should be considered probably negative; above 90 per cent, often positive; and 100 per cent, probably positive.[7] An absence of dye does not exclude amyloidosis, but it does suggest the absence of generalized and severe amyloid disease. The test has no value as a screening procedure, but it may be helpful in confirming suspected amyloidosis.

This case represents primary or idiopathic amyloidosis in that there was neither infectious disease nor a chronic inflammatory disorder predisposing to the development of amyloid. Nor was there a history of familial amyloidosis to suggest a genetic form. Classification solely on the basis of staining reactions of the substance and organ distribution is not uniformly reliable. There is enough overlap to render these bases for classification inapplicable in occasional cases.

Currently we are seeing more cases of idiopathic than of acquired or secondary amyloidosis.[8] A result of early precise detection of amyloid through use of polarization and electron microscopy has been an increased awareness of the prevalence of amyloidosis. For those who regard morphology as a dead or inert study, I think the recent structural findings in amyloid provide an example of how valuable an investigative tool it can produce. This handle will be valuable in experimental work on the pathogenesis of amyloid, as well as in the delineation of its physicochemical properties. The current concept of its pathogenesis involving an altered immunologic reaction has been challenged by the finding that the disease is familial and by the finding that the bulk of amyloid is fibrous protein rather than gamma globulin. It remains unknown whether the ground substance associated with amyloid is normal or abnormal, or even a significant component of the disorder. Recent hypotheses implicate an inborn error in metabolism, and an as yet unidentified biochemical lesion such as an altered metabolic pathway leading to the formation of amyloid fibrous protein.

Dr. W. M. Kirkendall, Internal Medicine: Dr. Davis, the protocol stated that a duodenal biopsy had been obtained. In retrospect, was there any evidence of amyloidosis involving the duodenum?

Dr. Davis: The duodenal biopsy was normal by usual means of investigation, but it did show small amounts of amyloid under the polarizing microscope.

Dr. Kirkendall: I bring this up because the gastrointestinal tract is supposed to be a particularly good spot in which to find amyloid. The other question I should like to ask you is whether massive proteinuria tends to produce false positives on the Congo-red test?

Dr. Davis: I suspect that such might be the case. The variables in the Congo-red test include urinary excretion of the dye, the status of the cardiovascular system, and quantitative and qualitative differences in amyloid from case to case. The occasional untoward reaction that one encounters with Congo-red dye—and at least one death has been reported—has been explained on the basis of a nonspecific binding of dye with the serum protein to form a toxic azoprotein. Perhaps binding does occur with serum proteins, and there is a consequent excretion rather than a binding with amyloid.

Biopsy is very useful in the diagnosis of amyloidosis without the special technics I mentioned. The site of biopsy should be fashioned to fit the clinical presentations of the patients. If a patient has skin involvement, a skin biopsy will usually be diagnostic. If there is renal involvement, as there was in this instance, renal biopsy ordinarily will be diagnostic. If no target organ of involvement is manifest clinically, biopsy of the gastrointestinal tract, especially the rectum and including the submucosa, is apt to be fruitful. In most instances the diagnosis can be made on an ordinary biopsy, but an occasional case will present a significant diagnostic problem.

Dr. Seebohm: Dr. Davis, your slide showed the amyloid on the endothelial side of the basement membrane, and of course, the foot-process derangement is on the epithelial side. Do you think the foot-process change is due to the albuminuria?

Dr. Davis: The fact that amyloid is initially formed on the endothelial or mesangial side of the basement membrane fits with what most investigators currently are describing. It is popular to conceive the change in the foot processes of the epithelium as secondary to changes in the basement membrane. I said "popular," but I didn't mean to imply that the idea is universally accepted.

Dr. J. M. Layton, Pathology: In experimental nephrosis in animals, the foot-process lesion precedes the proteinuria.

Dr. Davis: In animals, amyloid has occurred first on the endothelial side. In human beings, when amyloid deposition is extensive and severe, it extends through the basement membrane and appears on the epithelial side. But I don't think the question has been completely settled as yet. There may be cases in which the reverse is true.

Dr. Mason: Was the renal-vein thrombosis severe enough to contribute to the nephrotic syndrome?

Dr. Davis: It was a nonocclusive renal-vein thrombus, and it apparently postdated the occurrence of nephrotic syndrome by several months.

Dr. Henry E. Hamilton, Internal Medicine: Dr. Davis, you said that the marrow showed a reactive plasmacytosis. Do you believe it represented the body's attempt to form more protein because of the massive proteinuria, or do you think that these plasma cells really produce the amyloid protein, and that it then is transported to distant sites and laid down in this peculiar fashion?

Dr. Davis: I don't think that point has been completely settled. The popular concept today is that amyloid is formed at least at some sites in the endothelial cells, but I don't think it has been described and documented with special microscopy in plasma cells, though the possibility has not been dismissed. It is more likely that this fibrous protein is formed *in situ,* and *is not* carried from a distant site to be deposited locally.

Dr. Hamilton: I wonder whether we could propose adrenal insufficiency as the cause of death. The adrenal cortex was significantly involved with amyloid. Note that there was a drop in blood pressure to 80/60 mm. Hg., and that patients with generalized amyloidosis often have hypotension. The first patient with generalized amyloid disease whom I was personally involved with was a young Fijian scout ill with uremia and hypotension. His adrenals were infiltrated with amyloid. He died quietly without any dramatic event, just fading out of the picture. This would all fit with adrenal insufficiency and hypovolemia. I think the chain of events leading to death in the patient whom we are discussing today was triggered by adrenal failure.

Dr. Davis: It is unusual to see adrenal hypofunction in primary or idiopathic amyloidosis. It is more apt to occur in secondary or acquired amyloidosis, but we cannot exclude that possibility.

Dr. Hamilton: Her adrenal gland was quite obviously involved, at least as I saw it a few moments ago here on the screen. Isn't that correct?

Dr. Davis: I should interpret the involvement as a moderate one. I don't think the degree of involvement showed to advantage in the photograph.

Dr. Seebohm: I think those clinical findings—the hypotension, the weakness, and the hypovolemia—are characteristic of nephrotic syndrome, regardless of the fundamental etiology.

Figure 3. Electron micrograph of renal amyloid, showing its fibrillar character (× 40,000; negative stained). Collagen fibers are larger and exhibit banding.

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SEARLE

Research in the Service of Medicine

Dr. Sheets: The cause of death, or the apparent lack of one, disturbed me. On the basis of the record, adrenal failure was the best explanation that I could propose. The serum potassium just before death was normal; the electrolytes were fairly normal; and the BUN was normal a short time before death. At postmortem, the BUN was 50 mg. per cent. It is difficult for me to believe that renal failure could have been the cause of death in this patient unless something was going on that was not measured.

Dr. Layton: There is a good possibility that cardiac arrhythmia may have been the terminal event. Amyloid is deposited in the heart, and may be deposited around the SA node and the conduction system, producing interference with cardiac rhythm.

Dr. Wilson: It is also reported that the digitalis sensitivity may be increased in primary amyloidosis.[9] Did this patient get digitalis during her terminal illness?

Dr. Sheets: I don't believe so. She had digitalis early in the course of the disease, but on the last admission she did not get any.

Dr. Hamilton: Dr. Sheets, I'd just like to mention that a few years ago we presented a patient here at CPC who had died of untreated adrenal insufficiency. The adrenal glands were completely replaced by histoplasma, I believe. The patient had had serial electrolyte studies right up to the day of death, and they were more or less within the normal framework. That patient had hypovolemia and a small heart, and just faded away. Because of the compensatory mechanisms, one can have relatively normal electrolyte patterns right up to the end. Finally, the adult with nephrosis often has a normal blood pressure. Profound hypotension is not part of it.

Dr. Kirkendall: It might be of interest that steroids are thought to be contraindicated in the treatment. One or two reports have shown that patients with primary amyloid have grown steadily worse while on steroids. There is experimental evidence to support this, too, I believe. On the other hand, I think we should recognize the fact that no one with primary amyloidosis has survived for a very long period of time.

Dr. Mason: I wonder whether Dr. Connor can tell us why the cholesterol is elevated in people with low albumin values. It has been reported that if one gives sufficient polyvinylpyrrolidone, or gamma globulin, or dextran, or albumin to these people, the serum cholesterol returns to a normal level.[10]

Dr. W. E. Connor, Internal Medicine: That has always been an interesting observation, and particularly in the last few years when more lipid fractions have been measured—more investigations have been done. For example, Baxter found that the correlation between the serum albumin varied inversely with the height of the serum cholesterol concentration.[11] Moreover, I believe we should appreciate that other serum lipids are also involved. Probably the hyperlipemia of nephrosis is a disorder of lipid transport. Serum phospholipids are also elevated. The elevated lipids in this particular patient were as follows: serum cholesterol 638, serum phospholipids 439, and serum triglycerides 418 mg. per cent. Her free fatty acids were normal. Of these four lipid classes, cholesterol, phospholipid, and triglyceride are transported by the beta and alpha lipoproteins, whereas the free fatty acids are transported primarily by the attachment to serum albumin. One hypothesis is that the low serum albumin decreases the amount of free fatty acid which can be transported for the energy requirements of most of the working cells of the body. Thus, perhaps under the influence of the pituitary hormone, the liver is stimulated to synthesize other lipoproteins. These other lipoproteins then carry triglyceride, cholesterol, and phospholipid, and perhaps supply an energy deficit which the free fatty acid fraction in the albumin might otherwise provide. Of course in both experimental and human nephrosis, as Dr. Mason previously mentioned, if the serum albumin is prevented from falling, the serum lipids do not rise. Friedman ligated the ureters in rats that had been made nephrotic with anti-kidney serum, and because albumin could not be excreted from the body, the albumin level in the plasma did not decline. Similarly in humans who are nephrotic, if the plasma albumin can be increased by infusions of serum albumin, then the serum lipids fall. Thus, we can think of nephrotic hyperlipidemia as a disturbance of fat transport that occurs because serum albumin is not available to distribute free fatty acids for energy purposes.

Dr. Mason: Does dextran transport the free fatty acids?

Dr. Connor: The answer to that question is not completely known. It is true that dextran is a hypolipidemic agent in other conditions as well as in the nephrotic syndrome. As a result of some preliminary experiments, we can report that dextran (m. wt. 75,000) does not bind oleic acid.

Audience: If this patient had been known to have amyloidosis, how would you have treated it?

Dr. Sheets: There isn't any specific treatment.

Audience: Would or would you not have given her steroid treatment?

Dr. Kirkendall: The evidence available wouldn't contraindicate the medicament absolutely. Because of the poor prognosis without steroids, one might give them a trial on the outside chance that they would help.

Dr. Sheets: But actually there isn't any known specific treatment of amyloidosis. It would have been a matter of trying prednisone in order to see whether it had any value.

SUMMARY OF NECROPSY FINDINGS

1. Primary amyloidosis.
2. Renal failure (with nephrotic syndrome), due to 1.
3. Renal-vein thrombosis, left, recent, due to 1.
4. Patchy pulmonary fibrosis and emphysema.
5. Atelectasis.
6. Chronic thyroiditis.
7. Fat necrosis, tail of pancreas.
8. Esophagitis, agonal.
9. Atherosclerosis, generalized, mild.

STUDENTS' DIAGNOSIS

Nephrotic syndrome, cause unknown.

DR. SEEBOHM'S DIAGNOSIS

Nephrotic syndrome, cause unknown.

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Panel Discussion: THYROID DISEASE

New Drug for Gonorrhea

Preliminary tests have been favorable for a new antibiotic used to treat gonorrhea, according to a report from the USPHS Communicable Disease Center, Atlanta, and the Fulton County (Atlanta) Health Department, in the March 14 JAMA. The drug, cephaloridine, may prove particularly effective in treating persons allergic to penicillin. It may also be effective against gonococcal strains that are showing increasing resistance to penicillin.

A cure rate of between 88 and 98 per cent was obtained when 84 male patients were given a single intramuscular injection of the drug. (Doctors aren't sure of the exact cure rate because about half of the men didn't return for a checkup. Three who did return had probable reinfections.) Stressing that their report was a preliminary one, the authors pointed out that larger numbers of patients, including women, now need to be tested. The early results, however, suggest that cephaloridine was effective and produced little, if any, allergic reaction.

Cephaloridine has been produced in England, and has been the subject of several favorable clinical reports there, the JAMA article said. Advantages of cephaloridine over a related drug, cephalothin, include a longer level of effectiveness in the blood, greatly increased solubility, and freedom from pain on injection.

"The control of gonorrhea remains a difficult problem in the United States, and estimates place the number of newly acquired cases at over one million yearly," the report said. "Many reports during the past 10 years have demonstrated an increasing resistance of gonococci to penicillin. This has required that penicillin dosages be increased periodically to maintain satisfactory cure rates.

"While estimates vary widely, it is generally conceded that 5 to 10 per cent of the population is now allergic to penicillin in some manner. Many of these patients receive therapy with alternate and often less effective antibiotics. Thus, the search for newer antimicrobial agents useful in the control of gonorrhea becomes increasingly urgent," the researchers commented. They are James B. Lucas, M.D., and James D. Thayer, Ph.D., of the USPHS, and Phillip M. Utley, M.D., Terrence E. Billings, M.D., and James E. Hackney, M.D., of the Fulton County Health Department.

DRUG SAFETY

In his NEW ENGLAND MEDICAL JOURNAL column "By the London Post," John Lister tells of an address on the subject of drug safety before the Royal College of Physicians, in which Sir Derrick Dunlop, chairman of the Committee on the Safety of Drugs of the British National Health Service, said it is difficult to know whether modern medicines are drugs, or whether modern drugs are medicines.* Sir Derrick quoted a new definition: "A drug—a substance which, when injected into a rat, produces a scientific paper." Though he acknowledged that any solution for a therapeutic problem has the potential of creating other problems, he declared that the extent of iatrogenic disease has become a matter of great concern, and that as many as 15 per cent of acutely ill patients in hospitals may be suffering from the effects of medical efforts to treat them.

A dramatic chain of events that occurred in a patient treated with penicillin for an acute infection illustrates some of the hazards of modern therapeutics. As a consequence of penicillin therapy, a severe reaction occurred which necessitated the administration of steroids. The taking of steroids caused the patient's ulcer to hemorrhage, and the hemorrhage necessitated blood transfusions and a partial gastric resection. Later the patient developed homologous-serum hepatitis; it progressed to cirrhosis of the liver and hepatic insufficiency; and ultimately hepatic coma and death occurred.

In his address, Sir Derrick emphasized that drugs are being overprescribed to a serious degree. Not only are too many drugs used, but they are given in too many combinations. Doctors are too much inclined to prescribe drugs, and the desire to take medicine has become a common characteristic of present-day mankind. The drug trade has taken advantage of those tendencies, and some of the practices that it has adopted are open to criticism.

When one considers the abuses that have occurred in the promotion of certain drugs, however, we must not forget the great benefits which modern medicines have conferred upon mankind, and specifically we must not fail to note the contributions that commercial firms have made to their development. It has been pointed out that of the 66 most valuable new drugs marketed since aspirin was made available, only nine have come from university centers, and the others have come from the profit-motivated pharmaceutical industry. It must be remembered that the cost of research is very great, that many projects are fruitless, and that there is nothing inherently wrong with making a profit. To emphasize the significance of profit motivation, it has been pointed out that in Russia since the October Revolution, not one drug has been discovered by the state-owned pharmaceutical industry.

Sir Derrick Dunlop, who was chairman of the Department of Therapeutics and Clinical Medicine at the University of Edinburgh, urges that the toxic effects of drugs must be kept in perspective. There is no such thing as absolute safety in the use of a drug, for if it is to be effective it must be capable of modifying a biologic process. If it does not do so, it is ineffective; if it does, there is always a possibility of side-effects. The proper perspective is somewhere between a too complacent attitude toward the toxic side-effects of drugs, and a too great distrust of drugs in general and of the drug trade in particular.

After the thalidomide disaster, the Committee on Safety of Drugs was created in Britain. A program for assessing the safety of new drugs was established, consisting of toxicity tests on laboratory animals, clinical trials by qualified physicians, and a critical analysis of reports of adverse reactions after the product has been released for marketing. Each approach has disadvantages if it is too rigid. The presence or absence of toxic manifestations in laboratory animals does not assure or preclude similar findings in human beings. Controlled clinical trials are often too superficial to have real merit, and amount to little more than testimonials. A central registry of adverse reactions to drugs provides an early-warning system. In the judgment of the author, such a warning probably could not have prevented the thalidomide disaster, but might have disseminated information about the teratogenic effects of the material quite promptly.

Sir Derrick emphasized the point that if the public wants therapeutic progress, it must assume some risk. The risk from cigarette smoking and the toll of deaths and injuries on the highways are accepted with too much equanimity. The risk of a surgical operation is recognized, and highly sophisticated and hazardous procedures have become everyday occurrences. Yet after one death from a new medication, the press carries the headline "Miracle Drug Now Recognized as Killer!"

In the two years since the formation of the Committee on Drug Safety, in Britain, the drug industry has submitted over 1,200 preparations for approval. Most of them have been reformulations of drugs already in use. Entirely new drugs sub-

* Lister, J.: By the London Post: Drug problem. NEW ENGLAND J. MED., 274:211-213, (Jan. 27) 1966.

mitted to the Committee averaged 60 per year, and accompanying reports on toxicology tests and clinical trials averaged 1,000 pages.

According to the author, the relationship between the Committee and the representatives of the pharmaceutical industry has been a satisfactory one, the exchanges between them being "robust, but good-natured." Only a small number of drugs have been rejected, but it often has been possible to persuade the manufacturers "to modify their intentions." The Committee's lack of legal power has been no handicap, for the pharmaceutical industry has been cooperative, and no drug has been submitted for clinical trials without Committee approval.

Problems relating to the safety of drugs and iatrogenic disease are not confined to any one country. Certainly the situation in Britain is not much different from the one here in the United States. The U. S. Food and Drug Administration, a division of the Department of Health, Education and Welfare, has responsibility for the safety of drugs, and its regulations governing the release of new drugs have become very strict. Both the FDA and the AMA Council on Drugs have registries to which adverse reactions are reported and by which periodic summaries of such information are distributed to participating hospitals and to those responsible for the control and safety of pharmaceutical products.

A carefully planned program of surveillance over adverse reactions at the Johns Hopkins Hospital was reported by Dr. Jay W. Smith at the 1965 meeting of the American Hospital Association.† All patients on the public medical service there, between January 1 and March 31, 1964, were included in the survey. An adverse reaction was defined as any response that the physician who prescribed the drug had not intended and desired. Each medical ward was visited daily, and head nurses, residents and interns were interrogated about any adverse effects of medicine during the previous 24 hours. The information was keypunched into data processing cards, and was stored on electromagnetic tape. A wealth of information can be procured by processing the data at the computer center. For example, it is pointed out that from a large number of records it is possible to select the number of white females over 50 years of age who reacted to penicillin during 1964.

During the three-month period of surveillance at the Johns Hopkins Hospital, 122 of 714 patients had adverse reactions to drugs. There were 184 reactions experienced by those 122 patients, and 97 of the patients (13.6 per cent of 714) developed their adverse reactions during their periods of hospitalization. Surprisingly, 36 of the 714 patients (5 per cent) had some manifestation of adverse reaction *on admission,* and in 28 instances it was a factor that prompted the patient's admission to the hospital. In fact an adverse drug reaction was the seventh most common cause for admission to the hospital. It was also determined that patients admitted with drug reactions developed an adverse reaction in the hospital at a rate twice the average for all patients. An adverse drug reaction was implicated in 11 deaths, but all of those patients had serious underlying disease. Reactions were somewhat commoner in elderly people, and considerably commoner in white females because of a high incidence of gastrointestinal side effects. Patients with drug reactions received an average of 14 drugs during hospitalization, or an average of 10 drugs before and four after their reactions. The drugs most commonly associated with adverse reactions were antimicrobials, digitalis and quinidine.

The Baltimore physician asserts that if small groups of patients are studied intensively in hospitals throughout the country, accurate incidences of adverse reactions can be established for all drugs. Interhospital cooperation could then make those data readily available to physicians. Only through an accurate appraisal of the risk can effective therapy be given.

† Smith, J. W.: Hospital adverse drug reaction reporting program. HOSPITALS, **40**:90-96, (Feb. 16) 1966.

MENINGOCOCCIC MENINGITIS IN THE ARMED FORCES

The recent report of an outbreak of meningococcic meningitis at an Air Force base in Texas and at seven other military bases, though not alarming, is a cause for serious concern. The ubiquity of the organism, the high incidence of carriers among recruits and the failure of sulfadiazine in mass prophylaxis are factors that raise serious problems in the control of the disease among large groups of young men who live intimately together in military camps.

A recent article by Col. R. G. Sigapoos, M.C., commanding officer at the U. S. Army Hospital, Fort Ord, California,* is based upon actual experience with meningococcemia and meningococcic meningitis there. It deserves the serious attention of physicians everywhere—both in military and in civilian practices.

He emphasizes the importance of early recognition of the disease and of prompt initiation of therapy. The earliest symptoms of meningococcemia with or without meningitis are difficult to differentiate from those of a viral or bacterial upper-respiratory infection. However, when meningococcal disease is present in a certain segment of the population, the presence of respiratory symp-

* Sigafoos, R. G.: Meningococcemia and meningococcal meningitis, resistant strains—early recognition of clinical aspects. PHILADELPHIA MED., **62**:107-109, (Feb. 5) 1966.

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toms should be looked upon with great suspicion, and anyone presenting with them should be put under close observation. In the military service, meningococcal disease occurs chiefly among recruits during their first eight to 10 weeks of military service, and among the children of the permanent cadre of the base.

According to Col. Sigafoos, almost without exception, the first complaints of the recruit with a meningococcal infection are of sore throat and malaise. Initially the temperature is normal or subnormal, but the onset of meningococcemia is ushered in by chills and a high fever. Headache, nausea and vomiting are frequent symptoms. In only about 30 per cent of patients is there a complaint of stiff neck associated with muscle soreness and headache. The presence of any of these symptoms calls for immediate hospitalization. Death in some of these patients has occurred within five hours of the initial symptoms. The recent news story on the present outbreak in military installations reported that one patient died in his barracks from meningococcal disease.

In the early stages of meningococcal infections, even though the patient complains of sore throat, the throat may appear perfectly normal. However the patient may show evidence of a mild nasopharyngitis. The complaint of undue fatigue, particularly if associated with unexplained hypotension, even in the absence of any objective findings, should alert the physician to the possibility of early meningococcal disease. Physical examination should include a careful search for petechiae, and that search should be done repeatedly. They may be few, and they may be scattered over the entire body. Initially the rash may be a macular erythema, but it rapidly changes to the characteristic petechial rash of meningococcemia. At Fort Ord, only about 30 to 40 per cent of patients have had meningitis, and those have had nuchal rigidity. The fulminating cases have high fever, an early onset of coma, and cardiovascular collapse with marked hypotension. These manifestations are grave prognostic signs.

At the beginning the white blood count in meningococcal disease is usually normal, but a low or normal count with a marked left shift makes one highly suspicious of meningococcemia. Later, the leukocytes number about 20,000/cu. mm., and the differential count shows a marked shift to the left. The blood culture is positive, and a positive throat culture is found in 50 per cent of the cases. If meningitis is present, the spinal fluid findings are characteristic; pleocytosis and the presence of gram-negative diplococci. Smears taken from petechiae may show the organism. Col. Sigafoos urges that the laboratory studies be performed before the initiation of therapy in suspicious cases.

The therapeutic regimen for meningococcic disease at Fort Ord has been a combination of chemical and antibiotic measures of great intensity. As evidence of their aggressiveness, it is worthwhile to outline them here:

1. Gantrisin, 4 grains IV stat.
2. Start an IV infusion of 2 grains of gantrisin and 10 million units of aqueous penicillin in a liter of 5 per cent dextrose in water during the first four hours.
3. Aqueous penicillin—Give intravenously 1 million units dissolved in 50 ml. of 5 per cent dextrose in water, over a period of 30 minutes every hour, after the infusion described in paragraph No. 2 has been completed.
4. After completion of the infusion as directed in paragraph No. 2, and in addition to intermittent penicillin therapy as outlined in paragraph No. 3, administer an intravenous infusion of 2 grams of gantrisin in a liter of 5 per cent dextrose in water every six hours. Continue it for 48 hours, or until the patient can take gantrisin orally.
5. After 48 hours, if the patient can take oral medication, give 2 grams of gantrisin every six hours.
6. After the intravenous infusion has been discontinued and the patient is on oral fluids, give procaine penicillin, 1.2 million units intramuscularly b.i.d., for an additional 12 days.

In patients with meningococcemia, hypotension may be a serious complication, especially in the first 24 to 72 hours. It may be due to endotoxic shock, or to the destruction of the adrenals. Very mild cases may respond to small doses of vasopressor drugs, but severe cases may require large doses of steroids and plasma-volume expanders. Renal failure is a common complication of meningococcemia, and requires strict attention to fluid intake and output.

The public should be reassured and made to realize that the military are doing everything possible to prevent the spread of meningococcal infections, and that there is no cause for alarm. Soldiers and sailors who develop the disease are being given the benefit of the ultimate in modern medical care.

HOME CARE FOR THE MENTALLY RETARDED

An assertion by a Canadian physician before a regional meeting of the American Academy on Mental Deficiency is a heretical departure from a sociologic philosophy of management of the mentally retarded which has prevailed since World War II. Dr. G. H. Lowther declared, "I believe that to force a moderately retarded adult to live indefinitely in an otherwise normal family circle is not only frequently destructive to the family,

but can be grossly unfair to the retardate himself, as such an arrangement simply does not meet his realistic on-going needs. I would go further, and say that exactly the same may be said for a substantial proportion of moderately retarded children at or approaching puberty."*

Prior to World War II it was common practice to send seriously retarded children to state institutions to live out their lives in association with peers who had similar handicaps. That course of action was usually recommended as soon as the disability was recognized. All too often, when these children were kept in their own homes, attention and affection were lavished upon them and the other children in the family were consequently neglected. Institutional care for the handicapped child permitted the mother to devote her energies to the care of her normal children, and to the creation of a normal, wholesome pattern of family life. At the institution, it was expected that the retardate would receive not only custodial and medical care but also schooling within his capacity, and vocational training commensurate with his abilities.

For the past two decades the prevailing judgment has been that the retarded child should be kept in the home, and that the community should provide the facilities for his academic and vocational training, as well as recreational and employment opportunities. Institutional care, it was maintained, should be provided only for those children whose communities could not be expected to provide special classes, and only for as long as they made progress in the training program. That concept was the inevitable result of overcrowding, of insufficient personnel, of inadequate facilities and of failure, even by large school systems, to provide these unfortunate children the training necessary to give their lives either meaning or purpose.

Now it is recognized that most state institutions have improved as a result of pressing demands for them to provide better care, more qualified staffs and more carefully planned training methods. However the numbers of available institutional beds are limited, and it is still the consensus that the institution should serve as a training center for the retarded and for the personnel who are to work with such youngsters in their respective communities. They still should not merely provide custodial care.

Although the child's own home assures him emotional support and the advantages of family living, certain disadvantages have been observed. In some families the presence of the subnormal child actually has contributed to family unity, but more often it has proved to be a disturbing influence. Many such children have not been given opportunities to avail themselves of the academic and vocational training offered by their communities. Instead of furthering their independence, self-reliance and maturation, their parents tend to keep them permanently in the status of children. Shielded and protected, they are deprived of the fellowship of their peers, and of the companionship they could get from youngsters with similar disabilities. The Canadian physician describes the confinement of such a child in the home over a period of years as one of "accompanied solitude."

He notes that parents have a deep concern about what may happen to their retarded son or daughter in the event of their death. The retardate who is suddenly deprived of parental emotional support at the age of 30 or 35 finds it difficult to adjust to life in an impersonal institution, or to life with relatives who more or less obviously do not want him. Such a state of affairs often results in withdrawal and has a serious psychic impact. Moreover, it occurs at an age when adjustment to change is especially difficult.

Dr. Lowther asserts that there is a need for developing an entirely new concept about the on-going care of the seriously retarded individual. Programs should not be restricted to childhood but should be planned for the entire duration of the retardates' lives. We must recognize that the parental home is not the place of choice for their indefinite residence, in the best interests of both the retardates and their families. Any proposal for the care of a retarded individual, whether his handicap is severe or moderate, must take into consideration his need for emotional support from his peer group. Some plan must be devised that permits a gradual weaning from childish dependence and encourages a relatively mature concept of self. Cognizance must be taken of the fact that institutional care for large groups of these individuals over long periods of time is both very costly and undesirable for other reasons. Any program which is to succeed requires adequate training for the people who are to provide permanent care for them, and the parents will need help if they are to see the wisdom of a plan that is to encompass the lifetime of their retarded child.

With those points in mind, Dr. Lowther proposes the creation of a new social unit which he calls "the retardate family." It includes a gradual weaning of the youngsters from the family setting, and subsequent residence in an institution for variable periods for evaluation, socialization and vocational training. Afterwards, groups of perhaps 10 or 12 young adults would be established as families, with the anticipation that the groups would change but little during the lifetimes of the members. A group might have a succession of trained foster parents during that length of time, but it is probable that the emotional support of their peers

* Lowther, G. H.: Retardate family as social unit in management of moderate mental retardation. Address at a Region 8 A.A.M.D. annual meeting, October 13, 1965, in Winnipeg, Manitoba.

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would cushion the traumatic effects occasioned by the departure of one set of foster parents and the arrival of the next. The members of each group would grow up together and grow old together in a home of their own, without the trappings and atmosphere of an institution. Proximity to a recreational center, training facilities and a sheltered workshop would be desirable. It is thought that retardate family homes could be located in communities of even modest size, either in converted houses or in structures specificially designed for such groups.

Dr. Lowther's suggestions are both timely and relevant to the problem of mental retardation, according to Walter M. Burnett, Ph.D., of Iowa's Comprehensive Plan to Combat Mental Retardation. That there is such a problem in Iowa is indicated by the fact that there are approximately 1,100 patients at each of Iowa's two state institutions for the mentally retarded. It is estimated that 3 per cent of the entire population is retarded mentally, or in other words, there are approximately 82,000 of those unfortunate people in the state. Of the 3 per cent, probably about 0.1 per cent have severe or profound retardation; 0.3 per cent are moderately retarded; and 2.6 per cent have mild handicaps.

In 1963 Congress passed a law authorizing the distribution of matching funds to public and nonprofit groups for the construction of facilities for the mentally retarded. In April, 1964, the General Assembly of Iowa designated the State Department of Public Health to administer the program here. Information about it can be procured from Dr. Burnett, at the State Department of Health, in Des Moines.

Although Dr. Lowther's plan has considerable merit, the creation of many small family units in widely separated places would present great administrative problems and a need for a large number of trained personnel. It seems that a cottage plan about a central training and workshop area would offer the advantages of a "retardate family" and yet avoid the disadvantages of a large institution. Ten such centers with several cottages each would cost much less to construct and to operate than would 50 units scattered throughout the state.

PROLONGATION OF PROTHROMBIN TIME

A report of a study at George Washington University on the effect of phenobarbital administration on the ability of bishydroxycoumarin (Dicumarol) to prolong the prothrombin time should be of interest to the clinician.* That study may explain some of the erratic responses of certain patients to seemingly adequate anticoagulant therapy.

The study included 49 adult hospitalized patients, and they were given Dicumarol orally for three days. The dosage schedule for all patients consisted of 4.5, 3.0 and 1.5 mg./Kg. of body weight on the first, second and third days, respectively. Thirty of the 49 patients who had been selected at random were also given oral doses of phenobarbital, 100 mg. at bedtime and 30 mg. three times daily. The latter medication was started 48 hours before the first dose of Dicumarol. Prothrombin determinations were made prior to therapy and once daily for at least three days after the onset of anticoagulant therapy. Nineteen control patients received no barbituates prior to or during the period of anticoagulation.

It is recognized that after the initiation of Dicumarol therapy, peak activity is reached within 1 or 1½ to 3 days. Among the 19 control patients the mean prothrombin time before therapy was 15.2 seconds, and after 72 hours of Dicumarol treatment the mean level was 30.5 seconds. In the 30 patients given both Dicumarol and phenobarbital, the mean prothrombin level before medication was 15.4 seconds, and after 72 hours it had increased to a mean level of 24.5 seconds. Thus after 72 hours a comparatively larger number of the phenobarbital-treated patients failed to attain a therapeutic range of anticoagulation.

The authors acknowledged that the study does not indicate whether all patients, or only a sensitive subgroup showed a decrease in response to Dicumarol when phenobarbital was given concurrently. However it did indicate that a large proportion of the patients were affected to the extent that a clinically desirable state of anticoagulation was not attained at 72 hours. That the interfering effect is not limited to the initial period of anticoagulation has been demonstrated by the fact that when barbituates were added to the regimens of patients already anticoagulated, the prothrombin times were restored to normal.

The mechanism by which barbiturates interfere with the effect of Dicumarol is not understood. It has been postulated that it is on the basis of a barbiturate-induced increase in the activity of coumarin-degrading enzymes. Sedation is not thought to play any role in the barbiturate effect. What minimal dose of barbiturate induces this response is unknown, and the duration of the effect after discontinuation of the drug has not been determined.

The authors conclude that barbiturates sometimes interfere with the anticoagulating activity of coumarin-like drugs, and that they should be discontinued in patients who show an erratic or suboptimal response to this form of treatment.

* Corn, M., and Rockett, J. F.: Inhibition of bishydroxycoumarin activity by phenobarbital. MED. ANN. DIST. COLUMBIA, 34:578-579, (Dec.) 1965.

Letter to the Editor

Sir:

In the January, 1966, issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY, an editorial entitled "Cholesterol and Coronary-Artery Disease" pointed to the rather disappointing results obtained in a British study of the effects of a low-fat diet in survivors of myocardial infarction. The editorial tended to discount the idea that coronary heart disease can be prevented in treatment by dietary methods.

It should be emphasized that few persons today advocate the use of a low-fat diet in the prevention of this disease. As a recent publication from the American Heart Association indicates, hypercholesterolemia and coronary heart disease are best treated by a combination of a reduction of dietary cholesterol, a lowering of saturated fat, and the inclusion of polyunsaturated fats in the diet.* In addition, excessive weight should be lost. While there may be some doubt about which of these measures is most effective, this consensus suggests three measures, none of which the British study specifically employed in its control trial.

A letter to the editor of the LANCET† pinpointed this problem rather specifically:

"The conclusion of a research committee that 'a low-fat diet has no place in the treatment of myocardial infarction' (Sept. 11, 1965) might be taken to indicate a general scepticism about the role of diet in the development and treatment of coronary heart disease. Many investigators of human lipid metabolism have found that the amount of dietary cholesterol is of critical importance in control of serum-lipid concentration. The research committee did not control the amount of cholesterol contained in the diet given to the experimental group. These patients received '14 g. (½ oz.) butter, 84 g. (3 oz.) meat, 1 egg, 56 g. (2 oz.) cottage cheese, . . .'—i.e., about 382 mg. of cholesterol—per day. This amount of cholesterol, when given to laboratory animals, will produce atherosclerosis, and it affects serum lipid levels in man. Thus, in light of evidence certainly not available when the research committee's trial was initiated, the diet selected might not have been the ideal one to use for therapeutic trial in that it contained a considerable quantity of dietary cholesterol. It is suggested that subsequent dietary trials should restrict dietary cholesterol much more.

"The results of this study also indicate that our best attempts to prevent coronary heart disease would probably have greater success in higher-risk individuals before the development of an actual clinical event. It is possible that the disease was already so far advanced when the study was initiated that little benefit could have been derived. We must recognize that there is little evidence to date, either in animals or in man, that advanced atherosclerotic lesions can be modified by any treatment programme, be it dietary or drug."

One might conclude that this British study neither refutes nor advances the idea that dietary measures may prevent coronary heart disease. To use this study as an argument one way or another is not appropriate. It seems desirable to obtain more information. In the meantime, physicians must use the best possible measures available now to treat their patients. Perhaps these recommendations of the American Heart Association are worth considering.

Yours sincerely,
WILLIAM E. CONNOR, M.D.

Iowa City
March 2, 1966

* "Diet and Heart Disease," Report of Committee on Nutrition, Central Committee for Medical and Community Program, American Heart Association, New York, 1965.

† Connor, W. E.: Low-Fat Diet in Myocardial Infarction (letter to Editor). LANCET 2:1128, 1965.

County Medical Societies Can Help With Campaigns Against VD

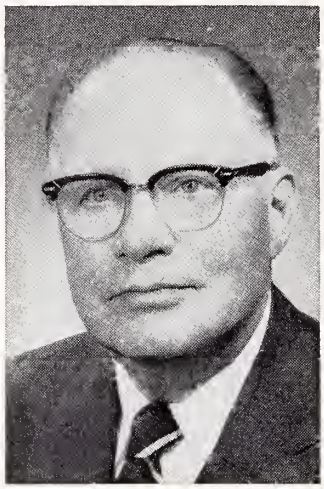
The AMA's Community Relations Department has distributed a page of suggestions to a large number of women's clubs, about ways in which they can help in eliminating venereal disease. The organizations are affiliates of Pilot Club International, and they are most numerous in the South, but if there are any in Iowa they may be requesting cooperation from county medical societies here, in consequence of the AMA's mailing.

In any case, however, county medical societies in Iowa may wish to offer speakers on the subject to local service clubs, and to get them supplies of the AMA pamphlet "Venereal Disease Is Still a World Problem" and of reprints from the September and December, 1965, issues of TODAY'S HEALTH for distribution to their members and to high school students.

Correction

We erred, on page 218 of the March, 1966, issue of the JOURNAL, in saying that 16 additional drugs —most notably the meprobamates—had been subjected to the Drug-Abuse Amendments as of February 18, 1966. Even though the staff of the Iowa Pharmaceutical Association had given us that mistaken interpretation, we should have seen for ourselves, when we read the government's announcement, that February 18 was no more than the deadline for objections to the HEW Secretary's intention to add them to the list. Months may elapse before pharmacists and dispensing physicians are required to maintain up-to-date records on them, as well as on the stimulants and depressants originally and presently covered by the Law.

President's Page



This is my "Swan Song" as your President. The year has gone rapidly and has been filled with challenges, successes and failures. In all it has been both a rewarding and enjoyable experience.

My thanks to you all for giving me the opportunity of serving my profession. My hopes are that I may continue to serve.

Frank Ober

President

THE JOURNAL *Book Shelf*

BOOK REVIEWS

BONE TUMORS, THIRD EDITION, by *Louis Lichtenstein*, M.D. (St. Louis, The C. V. Mosby Company, 1965. $16.75).

Dr. Lichtenstein's BONE TUMORS was established as a classic in medical literature when the first edition of it appeared, in 1952. His clear and concise style of writing, in itself, is proof that medical writing can be lively as well as informative. Dr. Lichtenstein is well known to all pathologists and orthopedic surgeons as one of the few authorities in the field of bone tumors.

Most of what was contained in previous editions has stood the test of time and remains in the new edition. The lesion formerly called osteogenic fibroma of bone, Dr. Lichtenstein now calls osteoblastoma of bone, for it represents the benign counterpart of osteogenic sarcoma. This category includes giant osteoid-osteoma of bone, which Dahlin and Johnson described. This lesion is closely related to osteoid-osteoma of bone, and thus it seems likely that osteoid-osteoma is a neoplastic lesion.

The third edition includes a new chapter on tumors of synovial joints, bursa and tendon sheaths, some of which Dr. Lichtenstein first presented in CANCER (1935). In addition, there is a new chapter on tumors of periosteal origin.

It is discouraging that very little of clinical importance has been added to this subject in many years, and one can only hope that the clear differentiation of bone lesions will lead physicians to more concise diagnosis and judicious treatment of them.—*John H. Kelley*, M.D.

CONTROVERSY IN INTERNAL MEDICINE, ed. by *Franz J. Ingelfinger*, M.D., *Arnold S. Relman*, M.D., and *Maxwell Finland*, M.D. (Philadelphia, W. B. Saunders Co., 1965. $14.50).

It does the modern physician good to be reminded occasionally that all of medical practice is not finite, precise science—that much of the art remains, that many questions are unresolved, that able and honest men may have forthright differences of opinion.

This compendium of debates over current topics in the field of internal medicine answers few questions, but it is a lively review by protagonists and antagonists of more than a score of issues. Among them are the usefulness of boards of internal medicine; atherosclerosis and diet; anticoagulants; dietary treatment for duodenal ulcer; to catheterize or not to catheterize; the control of obesity; chemotherapy of adenocarcinoma; and "lies, damn lies and statistics."

Some of the articles are as dry and ponderous as if they had come from the pages of almost any current medical periodical. Others are sprightly, stimulating and, in the best sense, controversial—e.g., "The doctor is more important than the drug"; or "If any of the cardinal sins does prove to be specifically implicated in atherogenesis, it is more likely to be sloth than gluttony"; or again, "Let the ulcer patient enjoy his food."

This book makes provocative, entertaining reading, and is a welcome change of pace from the daily grind of keeping abreast of medical literature.—*H. J. Smith*, M.D.

ELECTROCARDIOGRAPHY AND VECTORCARDIOGRAPHY, by *Lawrence E. Lamb*, M.D. (Philadelphia, W. B. Saunders Company, 1965. $17.00).

No respecter of tradition—or of grammar—Colonel Lamb draws upon a vast electrocardiographic experience with apparently healthy young adults in the U. S. Air Force to establish a basis of normal findings. His conclusion: "Many popular concepts in electrocardiography cannot be supported when the basic principles of logic and experimental design are applied."

Among his targets:

1. The explanation of electrocardiographic changes in infarction on the basis of muscle injury. Lamb says that this represents "a fundamental error in logic and cannot be accepted." He holds that damage to the conduction system, not to the myocardial fibers, is responsible for the EKG pattern.
2. The ventricular gradient. This concept, he says, "would not appear to provide any useful information over and above that which can be attained from the other components of the electrocardiogram."
3. Anterolateral myocardial ischemia. "Such a term connotes a specificity unrelated to the facts."
4. Anterior myocardial infarction pattern. "A nice theory, but there is no anterior wall to the left ventricular myocardium."
5. The "septal" Q wave. This "does not occur in the presence of normal septal activation."
6. The standard triaxial and hexaxial reference systems. These, he says, are "far from accurate"; the properly corrected hexaxial reference system is not symmetrical.

Detailed accounts of instrumentation, electrophysiology of the heart muscle, and volume conductors precede the clinical discussions. The precision of the technical presentation is marred by numerous editorial errors. "Ventrical" for ventricle (p. 127), "at the end of completion of excitation" (p. 167), "this criteria is met" (p. 261) are a few examples. While far from easy reading, the text is a valuable contribution to current developments in electrocardiography.—*H. J. Smith*, M.D.

PEDIATRIC THERAPY, SECOND EDITION, by *Harry C. Shirkey,* M.D. (St. Louis, The C. V. Mosby Company, 1966. $18.50).

This is a very valuable book to own for anyone concerned with therapy in children. The editor, Dr. Harry Shirkey, obtained a degree in pharmacology before he went to medical school. He served a three-year residency in pediatrics at the Children's Hospital in Cincinnati, and after a few years in private practice, was appointed medical and administrative director of the Children's Hospital of Birmingham, Alabama, in 1960. This unique combination of pharmacologist-pediatrician has the well-deserved reputation of being the outstanding authority on drug therapy in children in the United States. Of the 107 chapters in the book, he wrote 22 himself. In addition he presents, at the end of the book, a complete and up-to-date listing of all drugs used in pediatric therapy, and their dosages.

As collaborators, Dr. Shirkey enlisted the aid of 84 of the nation's well-known experts to write chapters in their respective fields. Included are chapters on infectious diseases, hematologic and metabolic disorders, psychiatry, ophthalmology, dermatology, allergy, pediatric surgery, poisonings and many others. The impression should not be left that the book contains merely a listing of drugs such as would be found in a pharmacopeia. It offers far more than that. While emphasis is on therapy, nevertheless, disease processes are identified, described and illustrated to the extent necessary to make the application of therapy most meaningful and understandable.

The illustrations are remarkable, both as to number presented (353) and the quality of photography. One of Dr. Shirkey's hobbies over the years has been the collection of photographs of children with physical abnormalities. He is said to have one of the most complete collections anywhere in the country, and he has been most generous in publishing them in his book.

This reviewer has no hesitancy in highly recommending this book to all physicians who deal with children, to medical students, to residents in training in pediatrics and to all medical libraries. It is one of the top pediatric books of the times.—*Lee Forrest Hill,* M.D.

GASTROENTEROLOGY, VOL. III, SECOND EDITION, by *Henry L. Bockus,* M.D. (Philadelphia, W. B. Saunders Co., 1965. $30.00).

If the first and the second editions of this book were to meet on the street, the former wouldn't recognize the latter. I well remember when the first edition appeared. It was just as World War II was coming to a close, in 1946. I thought that it was a classic which could never be surpassed, but as the years rolled by and as progress in gastroenterology came about, I realized that my favorite friend was developing grey hairs. One day I spoke to Dr. Bockus about rewriting it, and he answered that he would never do so, for it would be too much work. Now he has finished his second edition, and it too is a classic.

This third volume, about the "Liver, Biliary Tract and Pancreas—Secondary Gastrointestinal Disorders," is fully up to date. Dr. Bockus has again called upon his colleagues in Philadelphia, both his past and present associates, to collaborate with him. The present third volume is much larger in size than the former, and broader in scope. Again the work has large print, and excellent subtitles, and illustrations, but now our concepts are clearer and deeper. Now there are descriptions of biochemistry, of new x-ray technics. of syndromes that were not dreamed of 20 years ago. The gastrointestinal parasites, diseases of the liver and its blood supply, affections of the gallbladder and its ducts, diseases of the pancreas, and secondary affections of the gastrointestinal tract are covered with much greater detail and clarity.

Dr. Bockus puts us to shame with his tireless energy. The best we can do is to buy this book, the result of his (and his collaborators) labors. All internists should own the entire set.—*Daniel A. Glomset,* M.D.

BOOKS RECEIVED

HYPERBARIC OXYGENATION, by *Charles B. Pittinger,* M.D. (Springfield, Charles C Thomas, 1966, $5.50).

COMMUNITY MENTAL HEALTH SERVICES IN NORTHERN EUROPE, by *Sylvan S. Furman* (Bethesda, U. S. Department of Health, Education, and Welfare, Public Health Service, 1966, $1.75).

MODERN TREATMENT, Vol. 3, No. 1, TREATMENT OF HYPERTENSION, edited by *Alvin P. Shapiro,* M.D., and TREATMENT OF PITUITARY DISORDERS, edited by *Raymond V. Randall,* M.D. (New York, Hoeber Medical Division, 1966, $16.00 per year).

CURRENT THERAPY 1966, edited by *Howard F. Conn,* M.D. (Philadelphia, W. B. Saunders Company, 1966, $13.00).

DISORDERS OF CARBOHYDRATE METABOLISM IN INFANCY, by *Marvin Cornblath,* M.D., and *Robert Schwartz,* M.D. (Philadelphia, W. B. Saunders Company, 1966, $8.50).

DUPUYTREN'S CONTRACTURE, by *J. T. Hueston,* M.S. (Melb.), F.R.C.S. (Eng.), F.R.A.C.S. (Baltimore, The Williams & Wilkins Company, 1966, $7.25).

Salmonellosis, an Increasing Threat

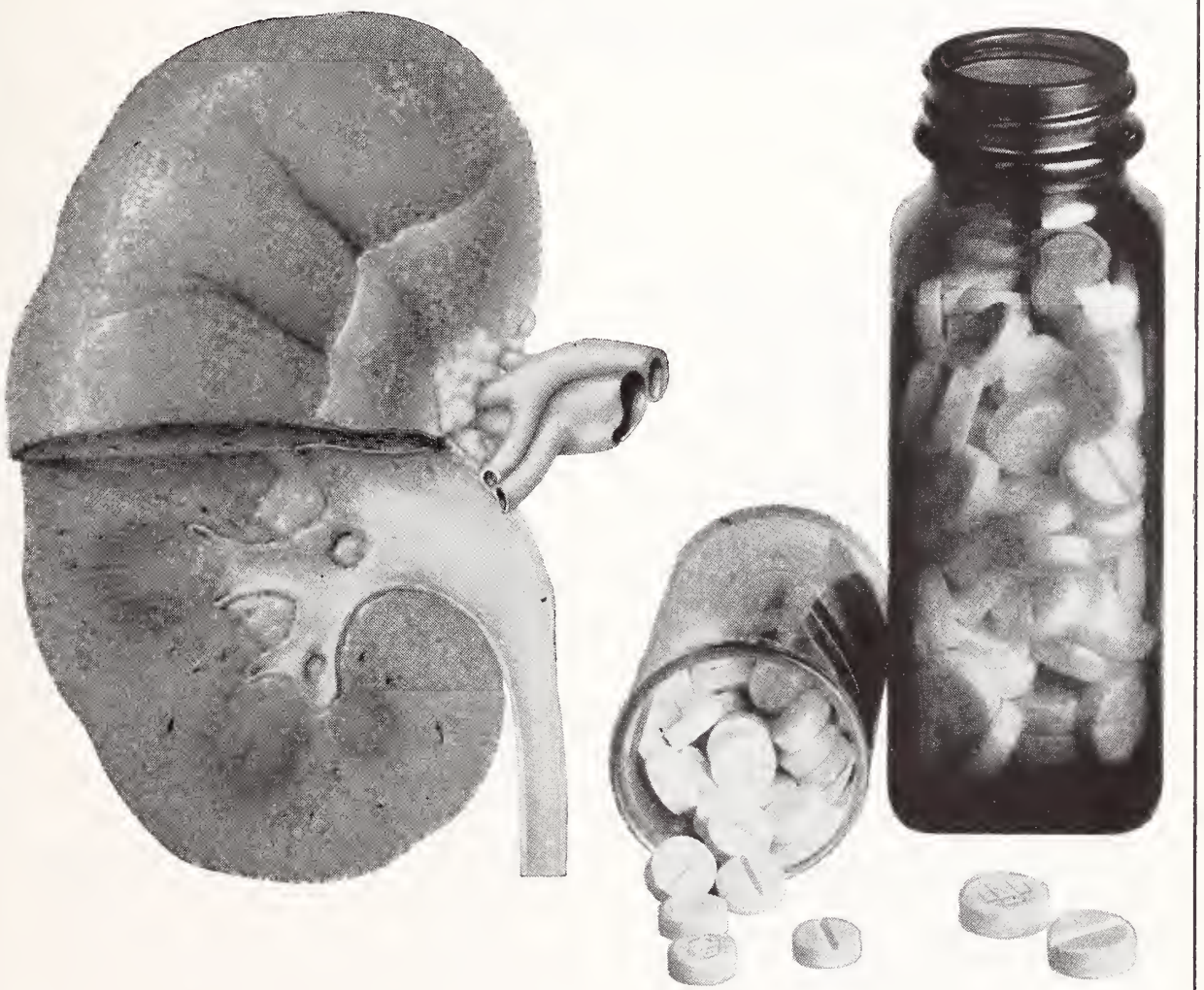
The incidence of salmonella infections has increased greatly throughout the United States during the past few years. At a seminar on salmonellosis in New York, recently, James H. Steele, D.V.M., stated that the number of reported infections rose from 7,000 in 1960 to more than 21,000 in 1964, and he estimated that there would probably be 100,000 cases annually by the end of the present decade.

Every instance of severe, persistent diarrhea should have a stool culture. Fortunately, the condition is generally self-limited, but the very young and the very old are especially susceptible. About one out of every 400 who develop the infection will become chronic carriers. Figures are not available as to how many of these carriers will become cooks and food handlers, but the incidence appears to be higher than the normal expectancy. Why this affinity should exist is not clear, but it seems to be true, nevertheless.

Chloramphenicol is still considered the most reliable drug, especially in treating the more serious manifestations of the disease. Ampicillin has given encouraging results in the eradication of the chronic carrier states, but its value has not been proven definitely. The best safeguard at present is careful policing of food handlers and foodstuffs, a high index of suspicion in persisting diarrheas, and a willingness to obtain stool cultures in all questionable cases.

—from an editorial in VIRGINIA MEDICAL MONTHLY, 93:175, (Mar.) 1966

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

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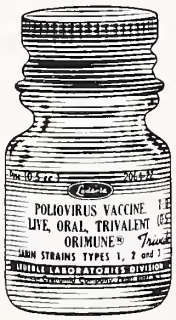

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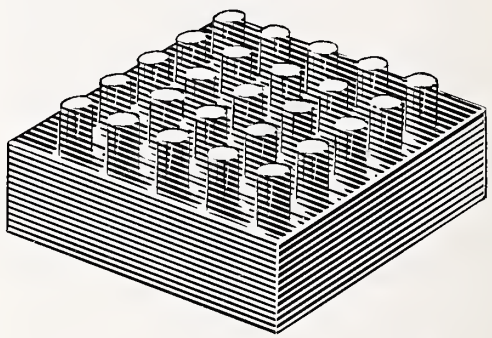
In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.
Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months). Booster immunization: one dose, given orally. See package literature for full directions.



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Side effects are possible but rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. Available in boxes of 5 (new individually-capped unit); cartons of 25.

*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

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THE DOCTOR'S BUSINESS

WIFE INSURANCE

HOWARD D. BAKER
Waterloo

Whether a man should or should not insure his wife's life for a substantial amount is a question on which strong feelings can easily be aroused. Over the years our policy, in general, has been one of opposition to the purchase of significant amounts of life insurance on wives. First, we believe that life insurance should be purchased to provide *financial protection*, for the survivors, and is justified only when such protection is really essential, has not already been purchased, and cannot be secured through more economical means.

Let us analyze the need for indemnity following the death of a doctor's wife. In a physician's family, the wife is rarely the major breadwinner. Since the principal source of income (the doctor) would still be present, how much *financial* loss would her death occasion?

It has been argued that the doctor's cost of living would rise appreciably, and we certainly agree. The cost of his domestic help and the increase in his income taxes would be significant. However, we do not believe that the threat of a rather minor loss of disposable income or even a slightly reduced standard of living is sufficient to justify his purchasing a substantial amount of insurance on her life. When we formulate an insurance program for the doctor himself—even a program that calls for large amounts of insurance—we anticipate that it will provide his widow and children a somewhat less opulent standard of living than they enjoyed during his lifetime. The cost of the standard of living that the doctor provided them previously would be prohibitive.

If the doctor is earning $25,000 or more and loses his wife, he will be quite able to adjust financially. His emotional and family adjustments will be much more severe—and he can't insure against them. We regard the loss of a wife as just as serious and costly—but no more serious and costly—than the discovery that a child is retarded or any of life's many other risks.

It seems highly inconsistent for a doctor to say, first, "If I die while earning $35,000 per year, I want my family to have $750 per month until my children are grown, and afterward I want my wife to have $500 per month for life," and then to add, "If my wife dies before I do, I want a large enough insurance settlement so that there will be no noticeable change in my family's standard of living."

What logic can justify foreseeing a 75 per cent reduction of family income if the husband dies, but little or no reduction in income if the wife dies? Actually, the family would suffer only a 10-20 per cent increase in expenses if the wife died, and that fact tends to substantiate our contention that the prospect of such a loss is insufficient to justify insurance. It is also ridiculous—though frequently true—that there should be a substantial amount of insurance in force on the wife's life, but a wholly inadequate amount of life insurance on the doctor's life, where the real financial hazard lies.

Certainly, unless and until the doctor has arranged an adequate program of insurance on his own life, he should not consider buying any on the life of his wife. And even after he has accomplished that much, we see little logic in his purchasing more than perhaps a $2,000 to $5,000 policy to cover the initial financial burden that his wife's death would bring.

Remember also that if a man has several small children and his wife dies, he probably should make an upward revision of his own life insurance program. His own death *after* his wife's death would create a much greater financial problem than would his wife's death while he still lived.

Remember also that "wives do not come cheap." Although you would need to have domestic help,

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was a agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

and although your taxes would go up following your wife's death, certainly you are not now maintaining her free of cost. The cessation of the bills you had been paying for her would at least partially offset the increased costs occasioned by her death.

Consider for a moment the cost of clothing a wife in a $35,000-income atmosphere; consider vacations, memberships in organizations, medical and dental care, and the many other economic aspects of her "care and maintenance." A minimum estimate of these costs for a typical family of five earning $35,000 would range from $4,000 up to a maximum of $5,000 to $7,000 per year. Only you can measure how much more or less it costs to maintain a wife than to employ a domestic, but the figure, nevertheless, will surprise you. Please remember, in this connection, that we are discussing "cost" and not personal value or family contribution. No amount of money can replace her personal contribution to your life and to the lives of your children.

Probably your greatest single monetary loss or cost, if your wife were to die, would be in your income taxes if you do not remarry. On this point, suffice it to say that your tax cost is related to your earned income. The more you earn, the more you stand to lose—but the less you need to cover this loss with insurance.

In summary, although we are strong advocates of adequate life insurance, and have for many years urged our clients toward ever-increasing programs, we are equally strong advocates of evaluating the various needs for insurance and placing the protection where the valid need for such protection exists.

THE PRESIDENT'S RECEPTION
and
ANNUAL BANQUET
Tuesday, April 26—Hotel Fort Des Moines
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ANNUAL BANQUET—7:00 p.m., Grand Ballroom
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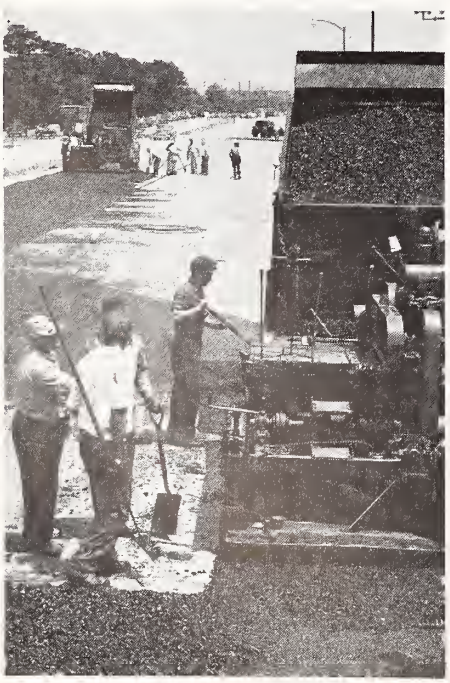

RVP-Elder, called "the most effective sunscreen," is also an ideal windscreen.

Constant occupational exposure to sun and wind often causes major discomfort in producing irritating sunburned and windburned skin . . . commonly found in street workers, construction workers, and telephone linemen, to mention a few.

There's reassuring protection and skin comfort for those outdoor workers who use RVP-Elder. Swimmers, golfers and others engaged in outdoor activities can have the same skin protection.

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References: (1) Schoch, A. G.: Current News in Dermatology, August, 1963; (2) Jillson, O. F., and Baughman, R. D.: Arch. Dermat. 88:409, 1963; (3) Cole, H. N., et al.: J.A.M.A. 130: 1, 1946; (4) MacEachern, W. N., and Jillson, O. F.: Arch. Dermat. 89: 147, 1964.

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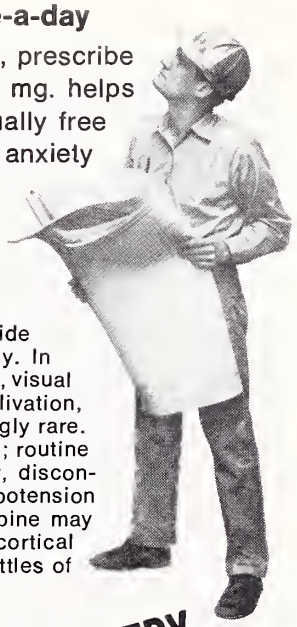

Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

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Iowa Chapter of the American Academy of General Practice

Lilly Seminar for Denison, Iowa

All physicians are invited and encouraged to attend the Lilly Seminar to be held at the Denison Country Club, in Denison, Iowa, on Thursday, May 5, beginning at 1:00 in the afternoon. For those physicians interested in playing golf in the morning, prior to the afternoon session of scientific lectures, the Country Club will be open to them with green fees, and clubhouse and shower facilities provided them through the courtesy of the Crawford County Medical Society.

This Seminar is sponsored by the Iowa Chapter of the AAGP in cooperation with the Crawford County Medical Society through a grant from the Eli Lilly Postgraduate Program. There will be no registration fee, but tickets for the dinner will be sold.

Following is the scientific program:

1:20 p.m. "Acute Chest Injuries"—Ralph A. Dorner, M.D., Des Moines
2:00 p.m. "The Respiratory Distress Syndrome"—Byron B. Oberst, M.D., Omaha
2:40 p.m. "Treatment of the Acute Coronary Attack"—Herman J. Smith, M.D., Des Moines
3:20 p.m. QUESTION AND ANSWER PERIOD
3:45 p.m. COFFEE BREAK
4:00 p.m. "Lesions of the Esophagus"—Dr. Dorner
4:40 p.m. "Personality Development in Childhood and School Adjustment Problems"—Dr. Oberst
5:20 p.m. "Rheumatic Fever"—Dr. Smith
6:00 p.m. QUESTION AND ANSWER PERIOD
6:30 p.m. SOCIAL HOUR AND DINNER

This program is acceptable for five credit hours to the American Academy of General Practice.

During the IMS Annual Meeting

Visit with Your Friends at the

Hospitality Suite of the Iowa Chapter

American Academy of General Practice

Sunday through Tuesday, April 24-26

Hotel Fort Des Moines

Refresher Course for the General Practitioner, Iowa City, Iowa

Feb. 15 Through 18, 1966

JOHN M. RHODES, M.D.
Pocahontas

This year's course again reflected careful selection and was characterized by interesting presentations of material. In a program of such length, some portions are bound to be rather academic for some tastes, but usually the academic gobbledygook was no more than a prelude to good, down-to-earth, practical applications. The especially fruitful Special Group Conferences were scheduled so that each physician could attend twice as many as previously. Medical videotapes were available for "night work" on the first two evenings of the course. The College of Medicine is to be commended for the over-all high quality of the course.

The highlight of the meeting was the social hour and dinner on Thursday evening. Marion Laboratories furnished refreshments, including the all-time favorite oysters on the half-shell. The junior and senior medical students were guests of the Iowa Chapter. The speaker, Mr. Oliver Field from the AMA Department of Investigation, regaled the audience with a display of ludicrous devices perpetrated by health quacks. The vigilance of this AMA department has protected the American people for many years from fraudulent schemes and economic losses.

Tuesday was devoted to *Pediatrics*. Dr. J. T. Wilson discussed *Fetal and Neonatal Pharmacology*. A brochure on neonatal pharmacology, supplied free by Roche Laboratories, was recommended. It was pointed out that the fetus and newborn differ from patients of any other age, in their responses to drugs. Several specific effects were enumerated, including tooth and bone discoloration from tetracycline and nitrofuran; low birth weights as consequences of maternal smoking; and the need for lower doses of penicillin and other drugs in the newborn period. Since drug metabolism is governed by body enzyme systems, a practical point was made in reference to the effect of the agricultural chemical Chlordane. It increases certain liver enzymes so that a patient on Dilantin who is exposed to Chlordane

can have an abrupt increase in seizures due to the rapid breakdown of the anti-convulsant drug.

Dr. Donal Dunphy talked next on the *Respiratory Distress Syndrome,* sometimes called hyaline membrane disease. To suspect and recognize this problem, the Silverman scoring system was recommended. (A scoring disk for this purpose will be supplied, on request, by Mead Johnson Laboratories.) The disorder is more common in premies, babies from diabetic mothers and babies delivered by section (especially if the indication for section was bleeding). No magical new method of treatment was offered, but Dr. Dunphy cautioned against making the diagnosis when some surgically-treatable condition is present (diaphragmatic hernia, pneumothorax, lung cyst). RDS babies apparently do best in an isolette temperature of 92°F., a humidity of 65 per cent and an oxygen concentration of 40 per cent.

Dr. Gerald Solomons spoke on *PKU Tests and Interpretations.* An informative article on this subject is to be found in the February issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY. Infants with this inborn hereditary disorder do not metabolize phenylalanine normally, so that increased amounts of phenylalanine or its intermediate degradation products occur. These apparently are deleterious to brain tissue. The Guthrie test, most widely used at present, is positive when increased phenylalanine is in the blood, but it must be remembered that it should not be done until the fifth day of life or later, since the infant must have had several days of protein in the diet if his metabolism of phenylalanine is to be tested. If the test is positive, further quantitative tests will help to determine whether the case is a true PKU, a suggestive PKU, a PKU "carrier" or an immature enzyme system. In any questionable case, consultation should be sought with the Dept. of Pediatrics at the S.U.I. College of Medicine, and the State Department of Health, since the management of a true PKU case takes the "teamwork" approach if mental retardation is to be prevented. Since Iowa now has a law making it state policy "that every infant born within the state, insofar as possible, shall be tested for PKU within a reasonable period following birth," and since the incidence is higher (1 in 10,000 births) than previously supposed, and further since the aberration causes irremediable brain damage unless treated by special diet (Lofenalac) before four weeks of age, it behooves all physicians to become knowledgeable on the subject, from the standpoints of both preventive medicine and medico-legal protection.

An interesting report on *What Happens to Ex-Premies* was presented by Dr. G. L. Baker. The most common abnormality found was cerebral palsy, usually of the spastic diplegia type. Of babies with birth weights under 1,300 Gm., two-thirds turned out to be retarded or uneducable. Later health records of premies showed twice the morbidity and mortality as compared with children with normal birth weights. It was very apparent that the "high risk mother" (because of pre-existing disease, pregnancy complications, poor nutrition) gave birth to "high risk babies." Thus, as an approach to the "premie problem," a plea was made for better prenatal education and care.

Practical Advances in Infant Feeding was the topic of Dr. L. J. Filer. Research has shown, he said, that corn oil and certain fatty acids are digested and absorbed better than butterfat. Also, he continued, "Artificial proteins have been developed that equal human milk in nitrogen retention and growth production. Thus so-called "synthetic" feeding of low-cost formulas may be a boon to disadvantaged populations." He pointed out that in populations with poor nutrition (We have some in our own back yard), the addition of iron to the infant formula produced a decline in infections. He presented an interesting comparison of hospital costs per day for infant formulas: for conventionally prepared formulas—98¢ per day; for ready-to-use formulas with reusable nipples—76¢ per day; for ready-to-use formulas with disposable nipples—82¢ per day. These figures apply only to moderately large nursery setups.

Neurologic Disorders of the Newborn was discussed by Dr. W. E. Bell. In a 40-minute talkathon jam-packed with material the following seemed most important: The grasp reflex is abnormal after three months of age. The Moro reflex normally is gone after 3½ months. In doing a spinal puncture in the neonate, remember (unless you want to do a practice aortogram) that the spinal canal is quite shallow. CNS protein is higher than in adults. It may be up to 90, but over 100 is abnormal. Be alert for premature synostosis of the skull, for surgery can prevent brain damage and retardation. Neonatal convulsions are never due to epilepsy, but usually to infection (meningitis and pneumonia), intracranial bleeding, hypoglycemia or hypocalcemia. If blood sugar is above 20, the cause of convulsion is probably not hypoglycemia. Hypocalcemia occurs after the fourth day, and is diagnosed by blood chemistry control. Neonate infections are difficult to diagnose because of an absence of fever and a normal white count, but one must be suspicious if the baby is "off feed." If the baby is fussy or "twitchy," suspect meningitis and perform a spinal puncture.

Dr. R. T. Soper spoke on *Surgical Emergencies of the Newborn.* Central nervous system conditions are most common (hydrocephalus, myelomeningocele). Various forms of gut obstruction comprise 40 per cent. The finding of one umbilical artery instead of two may be a clue to further anomalies. A useful aid that should be in every delivery pack is a #8F soft-rubber catheter. One should first pass it through the nostrils to rule out choanal atresia, then he should pass it into the

esophagus and stomach to rule out esophageal atresias, and finally he should use it to check the patency of the anorectal canal. If a large amount of bile-stained fluid is obtained from the stomach, one should suspect obstruction below the ampulla. X-ray studies are all-important in locating the area of obstruction. Look for the location of the "bubble." Remember that only an upright film will show pneumoperitoneum, and that an upside-down position is necessary to show the level of anal atresia.

In discussing *Parenteral Fluid Therapy for Newborn Infants,* Dr. C. E. Nelson sought to relieve the confusion over this problem. He outlined a simplified program, and distributed worksheets for reference. He advised the physician to familiarize himself with the precepts, rather than to prescribe fluids blindly.

Faculty members from the Department of Medicine presented the lectures on Wednesday. Dr. D. B. Stone talked on *New Concepts About Diabetes Mellitus.* Clues for the diagnosis of prediabetes and latent diabetes are often found in pregnancy: excessive weight gain, transient glycosuria, large babies. Latent diabetics should keep weight down to desirable or below-desirable levels. They should avoid such things as thiazides, oral contraceptives, niacin and steroids. Hypoglycemia can result from the oral hypoglycemic agents. It may occur after three to six days of treatment, and it may resemble a cerebrovascular accident.

Polycythemia was discussed by Dr. H. E. Hamilton. The diagnosis is sometimes difficult because some illnesses that resemble true polycythemia do not prove to be it when all the tests are in. The hematocrit can be misleading, but a red-cell mass over 30 and a plasma volume over 50 are significant. Phlebotomy is still the sheet anchor of treatment at SUI Hospitals. The use of radioactive phosphorus is minimal, since some reports show a 10 per cent incidence of acute leukemia following such therapy.

An interesting review of *Food Poisoning* was presented by a panel, with Dr. I. M. Smith as moderator. Staphylococcal poisoning has a rapid onset—from one to six hours—and explosive vomiting and diarrhea sometimes cause profound shock. Treatment by replacement of fluids and electrolytes usually restores health to all but the debilitated. Salmonella food poisoning usually has its onset about 12 hours after the ingestion of infected material, and it is accompanied by chills and fever, in addition to vomiting and diarrhea. The treatment consists of replacement plus Chloromycetin or Ampicillin.

A chronic carrier state can occur in salmonellosis. The gallbladder may be the focus and may be removed. Ampicillin in doses of 4 to 6 Gm. a day for three months is recommended for carriers.

Shigellosis or bacillary dysentery is uncommon but must be recognized, for without antibacterial treatment it may be fatal. The most effective drugs are Chloromycetin, neomycin and colistin. Botulism fortunately is rare. Meat and vegetables affected have a bad smell and bad color, but a new problem has been posed by the type E strain which infects fish. Since this type has no proteolytic enzyme, no odor occurs. Cases of botulism have occurred when infected fish packed in sealed plastic wrapping have produced heavy concentrations of toxins due to anaerobic conditions. The frightful neuromuscular symptoms and signs call for rapid diagnosis and treatment. The State Department of Health has antitoxin available for types A, B and E.

Stereoscopic and Fluorescein Studies of the Optic Fundus by Dr. W. M. Kirkendall and Dr. E. L. Allen was a fascinating visual display of a new technic for the study of ocular and systemic disorders. For those especially interested in this field, a book by Drs. Blodi and Allen is available.

A panel composed of Drs. E. O. Theilen, R. J. Joynt and W. E. Bell discussed *The Spell—Its Diagnosis and Treatment.* Medical causes include hyperventilation syncope, hypoglycemia (Watch out for the oral agents), vasovagal syncope, cough syncope, orthostatic hypotension (Watch out for certain hypertensive drugs) and various cardiac arrhythmias. Neurologic causes include grand mal seizures, petit mal spells (Adults don't have these), psychomotor seizures, cerebral vascular disturbances. In the latter group, transient ischemic attacks can occur, usually with involvement of the vertebral-basilar system and also the carotid system. More unusual causes are carotid-sinus syncope and postmicturition syncope. In children, it is well to remember that neither grand mal nor petit mal attacks usually occur until after three years of age. Petit mal can be diagnosed by the hyperventilation test. (In young children, do this by having the patient blow on a piece of tissue held away from the mouth. In two or three minutes, a petit mal spell can be reproduced.) Ninety-five per cent of patients with petit mal will have typical EEG changes. Zarontin is now the drug of choice for petit mal.

Although there are some who might not agree, Dr. P. M. Seebohm answered "Yes," to the question: *Is Hyposensitization of Value in the Treatment of the Allergic Patient?* It is true that only a small percentage get perfect results, but it is probably the best treatment when the diagnosis is accurate. Although there are many allergens, ragweed, dust and two molds account for the majority of symptomatic cases. Treatment for at least three years is recommended.

A most interesting panel discussion on the *Management of Patients with Incurable Renal Disease* was presented by Drs. G. B. Theil, R. L. Lawton and A. S. Norris. These patients may have a multitude of problems including anemia, acidosis, infection, hypertension, hyperparathyroidism, hy-

ponatremia, potassium imbalance, congestive heart failure, azotemia and various digestive disturbances. These complications are handled, for the most part, by the usual means and with close attention to blood chemistry. A diet restricted to 20 Gm./day of protein is used. These patients' lives depend on dialysis, usually twice weekly for 12 hours each period. The dialysis is carried out through a permanent arterio-venous shunt placed in the forearm or calf. The selection of patients for this type of program is based on medical needs plus evaluations of response to stress and intensity of motivation. In the group of patients treated, very little difficulty with emotional problems has been encountered. All look forward to a successful kidney transplant, and thus are motivated to accept their fate and the discomforts of dialysis.

The meeting on Thursday was devoted to *Obstetrics and Gynecology*. The staff discussed a number of problem cases and commented on possible treatment. The question of "perpetual youth" for the postmenopausal woman through cylic hormone administration was brought up. In cooperative patients who will come in for checkups, the use of equine estrogen, 0.125 mg. daily for 25 days, and then rest for five days, was considered acceptable treatment. To the comment that the female of the species already "has it too good," Dr. Keettel responded that natural aging still occurs in women, and that men probably won't have to take hormones to keep up.

Dr. W. R. Anderson next spoke on *Abnormal Vaginal Cytology*. When one takes a Pap smear, he should take the material from the portio-endocervical junction. If the cervix looks abnormal, even a normal Pap does not cancel the need for biopsy. In the normal-appearing cervix, an abnormal Pap requires biopsy of the abnormal area (Lugol's or toluidine blue staining). If no abnormal area is brought out by stain, conization is indicated.

Diabetes in Pregnancy was the subject of Dr. M. E. Yannone. He made a strong plea for the "team" approach, so as to give the diabetic mother all the help possible. Pregnancy can adversely affect maternal diabetes, and fetal mortality is four to five times greater when the mother has diabetes. The family physician should work with the internist, obstetrician and pediatrician, if these are available. Such women require more frequent prenatal visits and indoctrination in diabetic control. In the second half of pregnancy, they should be seen weekly. Pre-term delivery is advocated at the 37th week. The pediatrician should be alerted before delivery, since these babies, although often large, are fragile and have the development and reactions of premature infants.

Dysfunctional Labor was discussed by the staff, first in terms of recognition. The condition includes all deviations from the normal pattern of latent phase-active phase labor. Thus one may see (1) a prolonged latent phase type, (2) a prolonged active phase type and (3) a secondary arrest in a prolonged active phase. Too early use of cervical and saddle blocks may be the cause of situations (2) and (3). If cephalopelvic disproportion is suspected, pelvic measurements and the previous labor history may be of value, but a careful pelvic exam in the delivery room often gives much information. X-ray pelvimetry is useful, but it is not accurate enough for an absolute prognosis. In the "suspect" pelvis with borderline or less-than-optimum measurements, a trial of spontaneous labor may be tolerated, if closely followed. If dysfunctional labor (uterine inertia) occurs, section is imperative. When no disproportion is present in a prolonged latent-phase labor, intravenous pitocin may be given if there is 1 to 2 cm. dilatation, and membranes may be ruptured at 2 to 3 cm. In arrested active phase labor, intravenous pitocin may be given.

At all times these precautions are mandatory: Don't stimulate without full evaluation or consultation. Don't rupture membranes except in the delivery room (in case of cord prolapse). Don't stimulate if you suspect breech, face, brow or other abnormal presentation. Don't stimulate if you can't stay with the patient. If caesarean section is indicated, the operation of choice is the low cervical approach with transverse incision. The Porro type (with total hysterectomy) is indicated when cancer or infection is suspected, in some cases of fetal death, and in a uterus that is weak and scarred from previous sections.

The important problem of *Prevention of Postpartum Hemorrhage* was considered by Dr. W. C. Keettel. It occurs in 3 to 5 per cent of deliveries, and is responsible for two-thirds of maternal deaths. He listed some precautions that would help in decreasing mortality: Blood should be available in every hospital. There should be recovery-room care for obstetrical patients. Hospital staffs should encourage the team approach in difficult or complicated cases. Hospital staffs should make honest appraisals of the doctors doing obstetrics, and should make their privileges commensurate with their experience and performance, as well as with their training. The course of labor should be carefully followed, the baby should be delivered slowly, and the placenta should be expressed only when the uterus has become globular. If the placenta cannot be expressed in 15 minutes, it should be removed manually. If the placenta does not appear complete, the uterus should be manually explored. Bleeding may come because the uterus has not been raised out of the pelvis. The distention occasioned by twins or hydraminos may lead to atony and bleeding.

Tears of the vulva, vagina and cervix constitute a large group of cases. They are often missed because they are not looked for. Adequate light and retraction usually make these relatively easy to

find and repair. Oxytocic drugs are recommended in the third stage. In uterine atony, massage may be necessary, or occasionally an intrauterine pack, but rarely a section. Fluids and blood should be ordered early, for by the time they are started "it is later than you think."

Marital Counseling—An Increasing Medical Problem was the topic for a panel composed of Drs. L. R. Hughes, R. M. Kretzschmar, A. S. Norris and R. G. Bunge. They were agreed that the average physician has had little training in this field, from medical-school days on. To counteract the various non-professional inroads in this field, it behooves doctors to acquire a competency that will equip them for the role of advisor, within the limits of their individual personalities and practices.

In regard to gynecologic problems relating to sex, they said that very few female patients are willing to verbalize their questions spontaneously, but the question from the physician, "Are you having any difficulty in your role as wife and marriage partner?" will often open a floodgate. Young women frequently need to be educated in normal physiology, even after, or possibly *especially* after marriage. For example, the knowledge that the male libido peaks about every 48 hours, whereas the female libido usually peaks twice monthly, may save a worried bride from thinking she married a sex maniac. So-called frigidity in the female may not be the consequence of deep psychic scars, but of a "jack-rabbit" husband and a lack of understanding by both partners regarding the differences between male and female physiology. Down-to-earth advice, after a careful history-taking will help most couples. "Secondary frigidity" may be due to pelvic changes after pregnancy or surgery, but more often it is due to such things as fear of pregnancy, unresolved anger and frustration concerning the husband, or just a "drifting apart" as a result of sheer boredom.

In the "third-party crisis" the physician at times can help to save the marriage by advising the "aggrieved" party to go slow in making any irrevocable decision. Usually the history of the marriage reveals that it was "good, but dull." Many times, a cooling-off period will permit the "straying" party to take a hard look at the trade he or she is making, and to come up with a different answer. If both parties can admit at least partial responsibility for the dullness of the marriage and resolve to do better, the marriage not only will be saved but will be sounder for the future.

So-called impotence in the male is often premature ejaculation. Again instructions in normal physiology will help. This is one place where "who put the novocaine in the vaseline?" is not a lament but a definite aid (though five per cent nupercaine is better—applied to the glans). True impotence is usually based on emotional factors within the marriage, but many times it is not even directly related to sex, but to physical and nervous exhaustion. Often a "de-emphasizing" of the concern over the "temporary failing" is the best treatment. Organic disease factors are rarely found, and the value of drug treatment is inversely proportional to thousands of panaceas offered.

Friday was devoted to *Surgical* subjects. *Mammary Dysplasia and Mammography* were discussed by Drs. J. M. Layton, J. R. Thornbury, and S. E. Ziffren. Mammary dysplasia is basically a reflection of hormonal imbalance. Pathologically it can be classified into four groups: (1) adenofibrosis, in which there are few ducts and a great amount of stroma; (2) benign parenchymatous hyperplasia, in which there are many more glands in proportion to stroma; (3) precancerous hyperplasia, similar to (2) except some of the ducts are filled with plugs of cells; and (4) cystic disease (involutional cysts). Between a third and a quarter of all women have some form of mammary dysplasia. It is usually bilateral, and it usually becomes asymptomatic in pregnancy and after the menopause. The chief complaint is usually cyclic pain in the breast. If the process is diffuse and there are no definite masses, androgen therapy during the first two weeks of the menstrual cycle constitutes effective treatment. Dr. Ziffren recommends needle aspiration if a definite mass is palpable, and if fluid is obtained, he says the mass should be adequately excised. With a history of bloody discharge from the nipple, one should suspect intraductal papilloma, precancerous hyperplasia (20 to 30 per cent of these become malignant) or carcinoma. Surgical excision should be performed, and the source of the blood should be sought by checking the specimen. If no adequate source is found in the post-menopausal woman, a simple mastectomy should be done. Mammography is an exacting procedure requiring special equipment. Although it may be used as a screening procedure, there is some doubt that the results justify the expense. It is very useful, however, as a means of checking the opposite breast when cancer has been found in the first, and it also is helpful in determining whether the right area was removed when surgical excisions have been performed.

Polyps of the Colon and Rectum was the subject of Drs. R. D. Liechty, J. M. Layton and R. T. Soper. A polyp may be defined as a protrusion from the surface. The mucous membrane has two types of epithelium—surface and glandular. Neoplasms of the surface type epithelium are potentially malignant, and are called papillomas. Grossly, they present a roughened, dull surface. Neoplasms derived from glandular epithelium are non-malignant and are called adenomas. Grossly, they show a smooth, glistening surface. Combinations of the two elements have various degrees of malignant potential and are called papillary adenomas. Villous adenomas are unique in that they

may reach large size before causing symptoms, can produce large quantities of mucus and may have the x-ray appearance of cancer, but since three fourths of them are benign, they may be treated with less radical surgery than cancer. All polyps over 1 cm. in diameter should be removed. Juvenile polyps are "a different breed of cats," and probably are not true neoplasms at all, but heapings up of tissue as a result of infection or trauma. They occur mostly in two- to six-year-old children, usually in the rectum. They cause bleeding, they may prolapse and amputate themselves, and they are always benign.

A "squirming good" symposium on *Pruritis Ani and Anal Fissure* was presented by Drs. E. Green, C. E. Radcliffe and R. M. Kretzschmar. The suggeon says that a quarter of patients with pruritis ani have surgical lesions, but the dermatologist grudgingly puts one surgical condition: "Thrombosed Hemorrhoid—Rare" at the bottom of his list. One might conclude that it depends on which way one's bread is buttered, but from the general practice standpoint, dermatologic conditions outweigh surgical ones 10 to 1. Most cases of pruritis ani eventually show the clinical picture of lichen simplex chronicus, no matter what the original cause. Strong efforts should be made to establish etiology early, for specific treatment can be offered. Vaginal moniliasis and trichomoniasis can usually be accurately diagnosed and specifically treated if one thinks to check for them. Pinworm infestation and fungus infections can be demonstrated by simple office technics. Contact dermatitis from external causes is rare. (Toilet paper and "wet-strength" tissues may cause reactions.) But the ingestion of certain condiments and foods may cause pruritis. As for non-specific treatment, steroids may be used topically, but one should beware of combinations with antibiotics. Ten per cent of patients are probably sensitive to neomycin. In refractive cases, the steroid is better given by radial subcutaneous injections of repository triamcinolone 2.5 mg./cc. Cleansing the involved area is important, but gentleness is the key word—no rubbing! Oil-cleansing is best. No soap or detergent should be used. Cotton underpants and "air flow" seat cushions help absorb and evaporate moisture.

Animal Bites were discussed by R. T. Soper, M.D. and W. F. McCulloch, D.V.M. The human animal leads the pack in delivering a pot-pourri of pathogens with his bite. Such wounds should be debrided and allowed to heal by secondary intention. Tetanus precautions should always be taken. As far as dog bites are concerned, wound infection is unusual, and rabies is the most important disease to think of. The animal should be observed for 14 days, and if it dies, its head, packed in wet ice, should be sent to the laboratory at Ames or Iowa City for examination by means of the fluorescein antibody technic. Human immunization, using duck embryo vaccine daily for 14 to 21 days, is regarded as relatively free from serious side effects. Airborne transmission of rabies virus by bats has been proved. If a suspect bat is captured, one should send it to the laboratory at once without waiting for any incubation period.

Empyema in Children is on the increase, according to SUI records presented by Dr. J. B. Flege. Most cases are now caused by staphylococci. In chronic refractory cases, decortication of the lung is necessary. Although that is a formidable operation in a chronically sick child, the mortality has been nil at SUI, with the team approach.

The Carpal Tunnel Syndrome was discussed by Dr. G. E. Perret in the final paper of the meeting. This condition is caused by medial-nerve compression by the volar carpal ligament. Old fractures of the wrist or of the carpal scaphoid can be contributing factors. It is most common in middle-aged women. The earliest complaints are nocturnal paresthesias in the first three fingers. Later, thenar atrophy occurs. The treatment consists of sectioning the volar carpal ligament over the median nerve. The section must go well into the palm, and care must be taken to avoid the branch of the nerve that supplies the thumb muscles.

Coming Meetings

(Continued from page 344)

May 12-15	**16th Annual Meeting, Student American Medical Association,** Statler-Hilton Hotel, Los Angeles.
May 13	**The Modern Cardiovascular Practitioner, University of California,** San Francisco, Redwood Empire Heart Association, Santa Rosa.
May 13-14	**Convulsive Disorders,** University of California, San Francisco.
May 13-14	**Symposium on the Battered Child Syndrome,** University of Colorado School of Medicine, Denver.
May 16-20	**Animal and Clinical Pharmacologic Techniques in Drug Evaluation (part II) Hahnemann Medical College and Hospital,** Marriott Motor Hotel, Philadelphia.
May 21-22	**Health of the School Child,** University of California, San Francisco.
May 21-24	**Annual Meeting, South Dakota Medical Association,** Huron.
May 23-25	**1966 Annual Meeting, American Thoracic Society,** San Francisco.

ABROAD

June 16-22	**Fifth World Congress on Fertility and Sterility, Swedish Society of Obstetrics and Gynecology,** Stockholm, Sweden.
June 26-July 2	**Seventh International Congress of Gerontology,** Vienna, Austria.
June 30-July 5	**International College of Surgeons, New England and East Canadian Region Meeting,** Mont Gabriel, Quebec, Canada.

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Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-5761

Iowa Association of Medical Assistants

Tenth Annual Meeting

"This Fantastic World" will be unveiled by the Des Moines chapter of IAMA to members and guests at the tenth annual meeting of the Association to be held at the Hotel Savery in Des Moines on May 13, 14 and 15, 1966.

Mrs. Dorla Sansom, chairman of the 1966 convention program, says: "John Green, M.D., and Chaplain Russell Striffler will cover the World of Medicine from Pathology to Psychology in what promises to be an interesting manner.

"The Saturday afternoon program will cover credit problems as they exist in today's economic situation in the professional office; the legal and ethical aspects of current methods in medical offices; and what the experts anticipate regarding credit problems in the future.

"Installed in the hotel for our observation and use will be a direct connection to a voice-communication computer in Omaha, Nebraska. Other equipment to be demonstrated during the program will indeed provide us a look into the World of Tomorrow—Today.

"Representatives from Iowa Medical Service (Blue Shield) will be responsible for bringing to us current information and advice about filing claims under the Medicare provision. This part of the program has been scheduled for Sunday, so that latecomers to the convention will not miss this vital information. Medicare is now a fact, and the sooner medical assistants familiarize themselves with the rules and regulations, the more helpful they will be to patients and to their employer."

Friday, May 13

4:00-9:00 p.m. Registration—Assembly Room
7:00-9:00 p.m. Reception, sponsored by the Des Moines Chapter—East Room
9:00-10:00 p.m. Executive Council Meeting

Saturday, May 14

7:30 a.m. Registration, Coffee and Rolls—Assembly Room
8:00 a.m. House of Delegates—Des Moines Room
Election of Officers
10:00-10:30 a.m. General Assembly—Ball Room
Call to Order—Mrs. Dolores Mallinger, president, IAMA
Invocation—Chaplain R. Striffler
Welcome—Mrs. Barbara Plecas, president DMMA
Welcome—Robert Strickler, M.D., president, Polk County Medical Society
President's Address—Mrs. Mallinger
10:30-11:45 a.m. Introduction of Speakers—Mrs. Dorla Sansom, program chairman
"Office Diagnostic Procedures for Cancer"—John W. Green, M.D., Des Moines
"Old Wine in New Wineskins"—Rev. Mr. Striffler, Des Moines, clinical chaplain, Iowa Methodist Hospital
12:15-1:45 p.m. WORLD OF FUN—Terrace Room
Luncheon—Mrs. Dolores Mallinger, presiding
Invocation—Mrs. Lucille Holmes
Fashions by Feldmann's—Des Moines Chapter
2:00-3:30 p.m. WORLD OF TOMORROW—TODAY
Presentation by Des Moines Credit Bureau —John Robb, Mgr.
Presentation by Boone-Ames Credit Bureau —Richard Weibe, Mgr.
Demonstration by Northwestern Bell Telephone Company
Demonstration by I.B.M.
6:30 p.m. WORLD OF ENTERTAINMENT
Social Hour—Des Moines Room
7:30 p.m. DREAM WORLD
Banquet, Entertainment—Terrace Room

Sunday, May 15

8:00-9:00 a.m. Coffee and Rolls—Assembly Room
9:00-11:00 a.m. WORLD OF WONDERLAND
Medicare—Iowa Medical Service
11:00 a.m. WORLD OF FELLOWSHIP—Ballroom
Brunch—Mrs. Mallinger, presiding
Invocation
Installation of Officers
Announcements—Mrs. Gladys Barber, President, IAMA
Adjournment
1:00-2:00 p.m. Post-Convention Board Meeting—East Room

The Registration fee for the convention is $14.50 which includes all educational sessions, the Saturday luncheon, social hour and banquet, and the Sunday brunch.

Miss Nancy Hutson, convention chairman, extends an invitation to all medical assistants to attend, and urges an early registration. Checks should be made payable to IAMA Convention Fund, and should be mailed to Mrs. Lucille Holmes, c/o Drs. Latchem and Burke, 554 28th Street, Des Moines 50312. Hotel reservations should be made directly with the Hotel Savery, Des Moines 50304.

—*Helen G. Hughes*

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Morbidity Report for Month of February, 1966

Diseases	1966 Feb.	1966 Jan.	1965 Feb.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	750	413	479	Bremer, Hancock, Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	527	166	1,077	Bremer, Lee, Wayne
Whooping cough	8	1	7	Lee, Polk
Brucellosis	0	5	4	
Chickenpox	1,105	730	977	Dubuque, Polk, Pottawattamie
Meningococcal meningitis	2	2	0	Polk
Mumps	349	269	696	Clay, Polk, Pottawattamie, Winnebago
Poliomyelitis	0	0	0	
Infectious hepatitis	35	23	64	Black Hawk, Dubuque, Montgomery
Rabies in animals	14	16	19	Keokuk, Wapello
Malaria	0	1	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	10	24	20	For the State
Syphilis	57	65	50	For the State
Gonorrhea	217	243	204	For the State
Histoplasmosis	0	4	0	
Food intoxication	0	0	0	
Meningitis (type unspec.)	1	2	6	Montgomery
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	0	3	19	
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	1	
H. influenzal meningitis	1	1	3	Polk
Amebiasis	0	1	0	
Shigellosis	0	7	7	
Influenza	1	0	3,792	

Health Characteristics of the Older Population*

Both the prevalence of chronic conditions and the periods of disability that they impose increase with advances in age, particularly among men and women past mid-life. This is clearly evident from the accompanying table, which is based essentially on recent data collected by the National Health Survey in household interviews.

About four-fifths of the people at ages 65 and over are reported to have one or more chronic conditions, compared with less than two-thirds of individuals aged 45 to 64 years. The severity as well as the frequency of the chronic conditions increases with age. Only three per cent of persons at ages 45-64 are unable to pursue their major activity—to work at a job or keep house—but almost 16 per cent of the elder group are disabled to that extent. A larger proportion of men than of women at ages 65 and over are unable to carry on their major activities, probably because they more frequently are centered outside the home. One-fifth of the older men but only one-tenth of the women are so disabled because of chronic illness.

Heart disease and arthritis and rheumatism are the most common disabling chronic conditions, each being reported by approximately one-fifth of the people at ages 65 and over whose activity is limited to some degree. Other fairly common chronic conditions among older people are visual impairments, hypertension, and mental and nervous conditions—all of which are somewhat more frequent among women than men.

Additional information on the prevalence of heart disease in the United States is available from medical examinations of a nationwide sample of the population aged 18-79 years. The study showed that although little more than one per cent of the people at ages 18-24 have heart disease, the proportion rises to 25 per cent at ages 55-64, and to somewhat over 40 per cent at 75-79 years.

The prevalence of acute conditions, unlike the chronic, decreases with age, but such conditions cause a greater amount of individual disability to persons 65 years of age and over than to any other age group. The acute conditions account for

* STATISTICAL BULLETIN, Metropolitan Life Insurance Company, Volume 46, October, 1965.

an average of about 10 days of restricted activity per person annually in the older population, compared with 7½ days at ages 45-64.

Acute and chronic conditions restrict activity for an average of 38 days a year among individuals at ages 65 and over, and on 14 of those days the condition is sufficiently severe to require bed confinement. By comparison, persons in the age group 45-64 have an average of 22 restricted-activity days a year, of which seven are bed-disability days.

Accidents occur with considerable frequency among older people. Each year, nearly one out of every five persons 65 years of age and over suffers at least one day of restricted activity or receives medical attention because of accidental injuries. A majority of the injuries are sustained in and about the home, a fact which reflects, in part at least, the relatively large amount of time that older people spend at home. Motor vehicle accidents account for one-seventh of the injuries among the elderly.

As the final item on the table shows, about half of the people at ages 65-79 have lost all their natural teeth, compared with little more than a fourth of those 45-64 years of age.

HEALTH CHARACTERISTICS OF THE OLDER POPULATION
BY SEX, U. S. NATIONAL HEALTH SURVEY

Health Characteristics	All Ages Both Sexes	Under 45 Both Sexes	45 to 64 Both Sexes	65 and Over Both Sexes	65 and Over Males	65 and Over Females
	Chronic Conditions, Per Cent Distribution July 1961-June 1963					
All persons	100.0	100.0	100.0	100.0	100.0	100.0
Persons with no chronic condition	55.9	66.3	35.9	19.0	20.5	17.7
Persons with 1 or more chronic conditions	44.1	33.7	64.1	81.0	79.5	82.3
With no limitation of activity	31.9	28.5	43.7	32.3	26.9	36.7
With some limitation of activity	10.0	4.8	17.5	33.2	30.7	35.2
Unable to carry on major activity	2.3	0.4	2.8	15.5	21.8	10.3
Persons limited in activity by chronic conditions	100.0	100.0	100.0	100.0	100.0	100.0
Mental and nervous condition	7.7	8.7	8.7	5.8	4.2	7.2
Heart condition	16.0	6.5	18.4	21.8	22.4	21.3
Hypertension without heart involvement	6.0	2.3	6.8	8.3	5.1	11.2
Arthritis and rheumatism	14.8	4.9	17.5	20.7	15.0	26.0
Visual impairments	5.5	2.7	3.8	9.5	8.3	10.7
	Conditions and Days of Disability, Number per 100 Persons per Year July 1963-June 1964					
Acute conditions						
All acute conditions	208.5	240.3	139.7	114.8	102.9	124.3
Days of restricted activity	811.5	806.2	746.7	995.2	775.0	1170.3
Bed-disability days	345.9	362.4	288.3	346.7	304.7	380.1
Acute and chronic conditions						
Days of restricted activity	1617.7	1158.0	2223.1	3822.1	3465.2	4105.7
Bed-disability days	604.9	476.5	700.4	1382.8	1308.2	1442.1
	Persons Injured per 100 Persons per Year July 1959-June 1961					
All classes of accidents	25.5	27.4	21.8	19.0	16.9	20.6
Motor vehicle	2.7	2.8	2.6	2.6	*	*
While at work	4.6(a)	4.1(b)	7.8	1.8	3.3	*
Home	10.7	11.4	7.8	11.1	9.6	12.3
Other and unknown	7.5	9.2	3.6	3.5	2.6	4.2
	Edentulous Adults per 100 Persons 1960-1962†					
Edentulous adults	18.1(c)	5.1(d)	27.0	51.6(e)	47.3(e)	55.1(e)

* Too few cases in Survey sample to yield reliable results.
† Health Examination Survey data.
(a) Ages 17 and over. (b) Ages 17 to 44. (c) Ages 18 to 79. (d) Ages 18 to 44. (e) Ages 65 to 79.
Sources: U. S. Public Health Service, National Center for Health Statistics, Publications No. 1000, Series 10, No. 13, pp. 17 and 20; No. 15, pp. 16, 28, 29, 30, and 42; No. 17, pp. 12 and 15; Series 11, No. 7, p. 15; and Publication No. 584, Series B, No. 37, pp. 25, 26, and 33.

TUBERCULOSIS—NEW CASES
IOWA—1965*

Counties	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Allamakee					1	1					1		3
Appanoose							1	1	1	1		1	5
Audubon												1	1
Benton	1												1
Blackhawk				1			3			1	2	1	8
Boone	1				1							1	3
Bremer							1						1
Calhoun									1	1			2
Cedar						1		1				2	4
Cerro Gordo	1		1					1					3
Cherokee										2			2
Chickasaw				1			1						2
Clarke												1	1
Clay		1											1
Clayton												2	2
Clinton	1	1	2				1		1				6
Dallas			1										1
Davis		1											1
Decatur	1					1					1		3
Des Moines	1		2	1			1	1		1	1		8
Dickinson								1			1		2
Dubuque	1				1		1		1	2			6
Emmet				1				1					2
Franklin		1							1				2
Fremont					1		1						2
Greene		1	1		1				1				4
Grundy					1						1		2
Guthrie		1		1									2
Hamilton					1		1		1				3
Hardin										1	1		2
Harrison			1				1	1					3
Howard										1			1
Humbolt												1	1
Ida			1							1			2
Jackson				1				1					2
Jasper					1		1						2
Jefferson											1		1
Johnson							1		1	2			4
Jones	1										2		3
Keokuk								1					1
Lee			1	1						1			3
Linn	1	1	1		1			3	2	1	4		14
Lyon						1							1
Madison	1												1
Mahaska					1								1
Marion						1					1		2
Marshall									1				1
Mills	1		1						1				3
Mitchell					1								1
Monroe		1										1	2
Muscatine				1			1	1	1		2		6
Page			1				1		1				3
Palo Alto								1					1
Plymouth										1		1	2
Polk	4	3	1	3	2	1			3	5	3	1	26
Pottawattamie	1	1		2					1			3	8
Poweshiek					1					1		1	3
Sac	1										1		2
Scott	2	1	3	2	1	2	2	2	1	2	2		20
Shelby								1		1		1	3
Sioux				1									1
Story	1					1		1			1		4
Tama			1								1		2
Union										1			1
Van Buren	1											2	1	4
Wapello		1	2		2							6	11
Warren					1					1			2
Webster		1			1								2
Winnebago	1												1
Winneshiek									1				1
Woodbury		2	1	1	2	2					2	3	13
Wright										1			1
1965 Total	22	17	21	17	21	11	19	19	22	26	28	28	251
1964 Total	34	30	13	17	36	11	20	31	16	32	24	43	307

* To keep Iowa's morbidity reporting in conformity with that of the Morbidity and Mortality reports of USPHS, we have closed the year of 1965 with the week ending January 1, 1966.
1965 Total Reactivated Cases—16
1964 Total Reactivated Cases—44

AVAILABLE FROM THE STATE DEPARTMENT OF HEALTH

For venereal disease control
- Procaine penicillin (aqueous or oil suspension)
- Benzathine penicillin G (Bicillin)
- Achromycin (250 mg. capsules)

Immunizing agents
- Triple toxoid
- Diphtheria-tetanus toxoid (Combined, absorbed or precipitated—Adult type)
- Salk and Sabin poliomyelitis vaccines
- Typhoid vaccine triple (Typhoid, para A and para B)
- Smallpox vaccine

Rabies control materials
- Duck embryo anti-rabies vaccine
- Anti-rabies serum

Histoplasmin

Snake anti-venom (kept at poison center and sub-centers)

Gamma globulin (for protection of people exposed to measles, German measles, or infectious hepatitis, if the risk is sufficiently great)

For detailed information, see the April, 1965, JOURNAL, *pages 225-227, or telephone the Department.*

Woman's Auxiliary News

From the President

A HAPPY EASTER SEASON—What a wealth of meaning there is in these words. They stand for joy, good fellowship.

A new position of responsibility will usually show a man or woman to be a far stronger person than had been supposed. Efforts carry us over the dam.

Let us not shut our eyes to what is really excellent and rewarding in Auxiliary participation. There is no profession more worthy of our contributions of thoughts and deeds than the medical profession.

I hope the year coming to a close was a good year for you and, I hope that 1966-67 will be an even better one.

I want you to know that it has been an inexpressible pleasure for me to serve you as your State President.

—Patti Boe (Mrs. Henry)

Disaster Preparedness

In September, two copies of "Meetings That Move" booklets were sent to each county president or Disaster Preparedness chairman. These booklets are aimed to inform, to stimulate, to involve and to motivate Auxiliary members in the program of Disaster Preparedness.

Recently a letter in questionnaire form was sent to the chairman or president of each Auxiliary, requesting information about the disaster preparedness programs and what they had accomplished to date in their respective Auxiliaries in regard to the various aspects of preparedness. Enclosed were the names of two movie films on these subjects which are available for use at their meetings.

The Division of Health Mobilization award was also mentioned. It will be presented next June in Chicago to the county Auxiliary considered to have done the most outstanding work during the year in the areas of health mobilization. The choice will be based on activity in Medical Self-Help Training, the Packaged Disaster Hospital and Disaster Planning. Instructions on how to get into the running for this award were included.

—Mrs. Charles E. White, *Chairman*

Health Careers Committee

There is not much to report about health-careers recruitment at this time. There has been some activity, and some career workships have been held. Information on Career Clubs and how to proceed with plans for Career Day programs have been sent out upon request.

The State office has been most generous and helpful in sending out information to county presidents and Health Careers chairmen. Now, how can I get the chairmen to reply, and send me reports on their activities?

We should like to have some spring workshops, and I shall be glad to send information to anyone interested. Remember your Future Nurses Clubs. Inquire as to their needs; give encouragement; offer a program, or material on careers in the health fields for their libraries. Do they need a sponsor, or does your high school need information on how to organize a club? There is material available, and it will be sent out upon request.

It is uncertain at this time just how many health careers clubs there are in Iowa. We hope to make a survey in the near future. To get an accurate count, we must ask for the help and cooperation of the councilors and county Auxiliaries. Anyone have an idea on how to get started on this project? Anyone want to volunteer to help?

There was another letter sent out by this chairman the first part of February. We would like to know what you have done and what you have planned for this spring. Thank you for your cooperation.

—Mrs. Carroll O. Adams, *Chairman*

At Easter

It's no exaggeration to say that, in God's eyes, you are irreplaceable. He has given you a mission to perform that He has assigned to no one else. If you try to transmit to the world the bit of truth, goodness and beauty entrusted to you, you will experience the true joy of living.

—*Anonymous*

A Word to the Wives

Address delivered at the University of Iowa on Senior Medical Day, January 30, 1966, by Mrs. Howard Ellis.

Here are some gentle and some not so gentle hints on the art of being the doctor's wife.

One thing you will learn early is that although you may think of yourself as an authority on world affairs, as the star of the latest little-theatre production, or as the mother of the budding genius of the fourth grade, first, last and always in the eyes of the community in which your husband practices you are the doctor's wife. In that identity, for better or for worse, you will influence your own and your husband's relations with the professional and lay community.

The ability to smile, and to speak in a calm and tactful manner, under any and all circumstances, will be your greatest asset as the doctor's wife. A disciplined tongue, generally speaking, is not an inborn characteristic of a female, but it can be acquired, and acquiring one will not only contribute vastly to your domestic tranquility, but is a *must* if you and your husband are to enjoy good relations with the community in which you live.

Few persons are deluged with more unsolicited information than is the wife of a practicing physician. It comes from relatives, from friends, and often from total strangers. You will not only find yourself the possessor of the most intimate details of their personal lives, but you will be expected to provide at least some of the answers to their problems—or as sometimes happens, to ask your husband for the answers and relay them, because they just "didn't want to bother the doctor" themselves. You will frequently be used as a sounding board for real and for imagined grievances, both professional and personal, and you will find your replies quoted, requoted and misquoted. In short, you will have a myriad of opportunities to fall into hot water without even trying. But let me offer you a few basic ground rules, plus a generous helping of good, old-fashioned common sense to keep you both dry and unscalded.

Don't gossip. You will have to bite your tongue a good many times, but it will be well worth the effort. When good friends telephone and begin to cross-examine you on the ailments of a friend or relative, who is also your husband's patient, you must bite hard even if you don't know anything, for speculation is the most dangerous form of gossip. You may make your friend indignant, but her indignation will be as nothing compared to the rightful wrath of your husband and his patient if you divulge any information.

You will often find yourself on the receiving end of personal medical grievances, and of criticism directed at the medical profession in general. There will be more than one occasion when the temptation to make a scathing remark about the ability or the conduct of one of your husband's colleagues will be nearly irresistible. Remind yourself that, at best, you are hearing only one side of the story, and even with the full facts both you and the teller lack the technical knowledge essential to an accurate evaluation of the grievance.

Wise is the doctor's wife who tactfully suggests to the disgruntled patient that perhaps a misunderstanding has occurred, and that he should discuss his grievance with his personal physician. Wisest of all is the doctor's wife who then promptly forgets what she has heard—particularly when exchanging chit-chat with other doctors' wives. The comments you do not make will create no havoc in the professional community, and unlike some doctors' wives, you will never find your critical comments quoted in testimony at a malpractice suit.

Mr. Alexander Graham Bell's invention may have been the delight of your heart as a teenager, but as the doctor's wife, if you let it, it can become the monster of your existence. It can sound off at any and all times of the day or night, display an uncanny ability to select the most inopportune times for its clamor, and become an unexcelled spoiler of plans.

You will find that it takes very little talent to find yourself all dressed-up with no place to go, partnerless at the bridge table, or stranded at the club dance. But it takes talent, achieved by a healthy understanding of your husband's professional responsibilties, to handle the situation with aplomb. As a starter, you might remind yourself that he, too, was looking forward to an evening of fun and relaxation, and added to a shared disappointment that plans have been disrupted, is his keen awareness and sincere regret that your evening has been spoiled.

Many patients, upon being informed that the doctor is out, will proceed to give the doctor's wife a blow-by-blow account of their symptoms and seek her advice on what they should do. Medical advice is the sole prerogative of the licensed physician, and don't you ever, ever, forget it! Even the simplest and most innocent suggestion on your part can result in disaster.

No group in the past several years has been "cussed and discussed" so frequently, so extensively, and in so many communications media as has the medical profession. The doctor has repeatedly been pictured as a two-fisted money grabber, dispensing expensive pills and inadequate services. You, his wife, have emerged as the empty-headed social butterfly with two maids to do your household chores. Although John Q. Public's faith in the integrity of his own physician has tended to remain firm despite this constant brainwashing, his esteem for the medical profession has tended to deteriorate. You, the doctor's wife, can

be your husband's and medicine's most valuable ally in restoring the profession's image.

You, not your husband, will hear the bulk of John Q. Public's complaints against doctors in general and the medical profession in particular. Your husband's profession is *your* livelihood; you have just as great a stake in its future as does he.

Be informed on the issues confronting medicine and use your knowledge to inform the uninformed. Be prepared and willing to refute distorted information with facts and tact on any and all occasions. Utilize the many resources available to you, and in this context membership in your medical Auxiliary is invaluable as a means of understanding not only the objectives of medicine but all of the other issues, both national and local, which affect you and your community. Help your husband to keep abreast of legislative trends and of public opinion by bringing pertinent articles to his attention. Much of his reading is of necessity confined to technical journals.

Take an active interest in the well-being of your community. Put the training and experience you have acquired in the professions and in business to work in worthwhile community projects. Join the political party of your choice and participate in its activities. Good government is the responsibility of every adult citizen, and when you shirk this responsibility you cheat not only yourself, but your children and children's children as well.

Time, it has been said, is man's worst enemy, and certainly if you fail to put your time to good use, this old adage can be sorrowfully true. In the hectic pace of today's world, the demands upon our time are many. All too often we use a lack of time as an excuse for ignoring important facets of our existence; or failing to recognize their importance, we promise ourselves to give them attention when we find the time. When things are important to you, your family or your community, don't wait for the convenient time, the right time or finding time. *Take time!* The time you take to do the things that are important to the well-being of self, family and community will be returned three-fold.

So, how is it to be the doctor's wife? Well, that will be largely up to you. But I can tell you from long experience that with a little effort and understanding it can be *great*—about the best career a gal could hope for. If there are skeptics, I should like to quote from an article written many years ago by a doctor:

"To understand your husband and his job, you must go back to a time, possibly before you knew him, a time when he made the great decision to give his life to the care of the sick. No ambition for power, or fame, or glory, or riches prompted him in his choice of a career. Rather, it was his interest in science and his love of service. It was the highest idealism motivating him when he determined on the hardest, the longest, the most expensive preparatory education to take up a life's work whose main reward is the satisfaction of service well done. It is this idealism, this willingness to sacrifice, this sense of values that you, as his partner, must share with him and keep alive in him.

"As the husband of a doctor's wife, I am appreciative of the fact that no single influence helps to develop and mold the doctor as does his nearest partner in the business of life. Nothing—and I say this without the slightest reservation—is as important to shaping the doctor's career as is his wife and his home."—The Doctor's Wife, as written by ROCK SLEYSTER, M.D.

Being a good partner does not just happen. It will be the result of the effort that *you* make to understand and to complement your husband's life work through your daily activities. Truly your joy and success as the doctor's wife will be in knowing that you have been a good partner.

Mental Health Committee

Mailings pertaining to Iowa mental health programs, as well as information concerned primarily with publications and other available current material, have been sent to all county Auxiliaries.

On December 13-15, I attended a National Conference on Community Mental Health Programs that was convened in Chicago by the Council of State Governments and was co-sponsored by the National Institute of Mental Health. Also attending was Dr. T. C. Piekenbrock, chairman of the Iowa Medical Society's Committee on Nervous and Mental Diseases. Many representatives of federal, state, and county governments participated. The moral of the story seems clear—that if we do not plan for ourselves, others attempt to plan for us.

In Iowa, it is my hope that medicine may continue to lead in planning community mental health programs. It is my pride that our system of community mental health centers is somewhat unique —that there is local financial support and local control, through co-sponsorship of each center by its county medical society and a representative community board. This is clearly not the pattern in many parts of the country. Elsewhere, either there is state funding for mental health centers entirely, or there is some matching-fund formula basis. There is a possibility that the next legislature will provide state financing for local mental health centers in Iowa. The Auxiliary should be aware of this, and keep a watchful eye on any proposals that may arise.

I suggested that invitations to the Annual Meeting of the Iowa Association for Mental Health be sent to our Auxiliary Mental Health chairmen, with the hope that some would be able to attend, since anyone interested in mental health was wel-

come. The meeting was held in Cedar Rapids, February 6-8. Mrs. Winthrop Rockefeller, who participated in the Auxiliary's Regional Workshop in Chicago last October, was the banquet speaker. On the second day of the session, Helen Huber, of the Fort Logan Mental Health Center, in Colorado, discussed "The Role of the Nurse in the Comprehensive Mental Health Plan."

Another interesting session was a panel discussion on the Dubuque "Pastoral Marriage-Counseling Service," a unique interfaith counseling group that has been well-received. The Polk County Mental Health Association had sent a panel of speakers, each of whom presented either his own or an immediate family member's case history of psychiatric treatment. Further information on this meeting may be had by contacting Mrs. Westerhof at the Iowa Association for Mental Health office, 306 Flynn Building, Des Moines.

As always, your chairman will welcome any suggestions you may have for the work of this Committee, and if there are any questions, I hope you will forward them to me.

—MRS. B. R. GOLDMAN, *Chairman*

News From Around the Hawkeye State

Boone County

The Boone County Medical Auxiliary recently held a luncheon meeting and elected officers for 1966. They are as follows: Mrs. M. G. Sloan, president; Mrs. W. E. Rouse, vice-president; Mrs. E. E. Linder, secretary; and Mrs. D. L. Cross, treasurer.

It was decided that the Auxiliary should double its contributions to the Health Education Loan Fund of the Woman's Auxiliary. Also, it was reported that at present Boone County is the second highest county in Iowa for contributions to the American Medical Association-Education Research Foundation.

Woodbury County

Members of the Sioux Med-Dames entertained the wives of out-of-town doctors attending the annual meeting of the Sioux Valley Medical Society at the Sheraton-Warrior Motor Inn, Sioux City, on February 25. The doctors and medical students were also guests. Members attending were from Wisconsin, Minnesota, South Dakota, Nebraska, and Iowa.

A luncheon on February 24 at the Joe Gantz Steak House also honored the visiting wives. The decorations were in the mardi gras theme. The chairman of the event was Mrs. Donald Kivlighn; the co-chairman, Mrs. Havner Parish; and the hostesses, Mrs. George Skorey, Mrs. Horst Blume, Mrs. Edward Honke, and Mrs. Harry Robinson. Dr. Edward Hagen and Dr. James Brown were the speakers.

Worth County

Elections were held at a meeting of the Worth County Medical Auxiliary in January. Mrs. C. T. Bergen was elected president, and Mrs. R. L. Olson was elected secretary-treasurer of the group. The Auxiliary met in conjunction with the Worth County Medical Society. Both organizations donate to the nurses' health fund and the education scholarship fund, and belong to the organization for the mentally retarded.

WASAMA

Members of the Woman's Auxiliary to the Student American Medical Association (WASAMA) met in conjunction with the regional convention of the Student American Medical Association which was held on March 5 and 6 at the Memorial Union in Iowa City.

Cooperation between the two organizations was discussed during a series of meetings March 5. Professor Harold W. Saunders, of the University of Iowa Sociology and Anthropology Department, addressed the dinner at the Century House, West Branch.

Mrs. Miles F. Skultety spoke Sunday about the Woman's Auxiliary to the American Medical Association.

"CADUCEUS CAPERS"
Benefit Dance for the
Woman's Auxiliary
Health Education Loan Fund
April 26, 1966—8:30-12:00 P.M.
Don Hoy's Orchestra
Grand Ballroom—Hotel Fort Des Moines

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President-Elect—Mrs. R. E. Hines 3525 Witmer Parkway, Des Moines 50310
Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501
Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312
Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228
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Personals

Dr. Emma Jewell Neal, who will be 88 years of age on June 29, received a citation on February 17 from the medical staff and the sisters at Mercy Hospital, Cedar Rapids, commemorating her 63 years of service to the Cedar Rapids community. She is the only living charter member of the Mercy Hospital medical staff, and the senior member of the Linn County Medical Society. She is a 1902 graduate of the Keokuk Medical College, and she practiced in Cedar Rapids from 1903 until she retired a month ago. She has made her home at the Hospital since a stroke forced her to "slow down."

At the Annual Heart Forum, in Iowa City on February 9, the topic was "Strokes—Causes and Treatment," and the speakers were **Drs. Richard W. Fincham, Hiro Nishioka** and **William B. Bean.** The moderator was **Dr. Robert J. Joynt,** and **Dr. Thomas R. Nicknish** had charge of arrangements.

The Iowa chapter of the American Institute of Architects has named **Mr. Julian B. Serrill** its executive secretary. For the past several years he has been public relations director for Blue Cross and Blue Shield, in Des Moines, and before that he was a field secretary for the Iowa Medical Society.

Drs. L. E. Weber, Sr. and Jr. held open house at their new office building in Wapello on February 20. The elder Dr. Weber has practiced in that town since 1926, and the younger since 1955.

At the Polk County Medical Society's March 16 meeting, **Dr. Harold Margulies,** an internist who formerly practiced in Des Moines and for several years has served as an advisor on medical education in Pakistan and Lebanon, spoke on "The Medical Manpower Shortage in Developing Countries."

Dr. G. M. Gibbs, the medical officer for Des Moines County, was quoted in the BURLINGTON HAWK-EYE for February 20 as fearing that his locality had been struck by something approaching a measles epidemic. In contrast with six cases in all of 1964, and nine cases in all of 1965, Des Moines County had had 22 cases in the first six or seven weeks of 1966. He announced a measles-vaccine clinic for children between the ages of one and 14 years, to be held on March 23, under the joint sponsorship of the County Medical Society, the County Health Unit, the Jaycees and the State Department of Health.

The 125-bed hospital that was built a few years

a Private Psychiatric Center at Jacksonville, Illinois, *since 1901*

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LICENSED: Illinois Department of Mental Health.
MEMBER: Illinois Medical Service (Blue Cross-Blue Shield).

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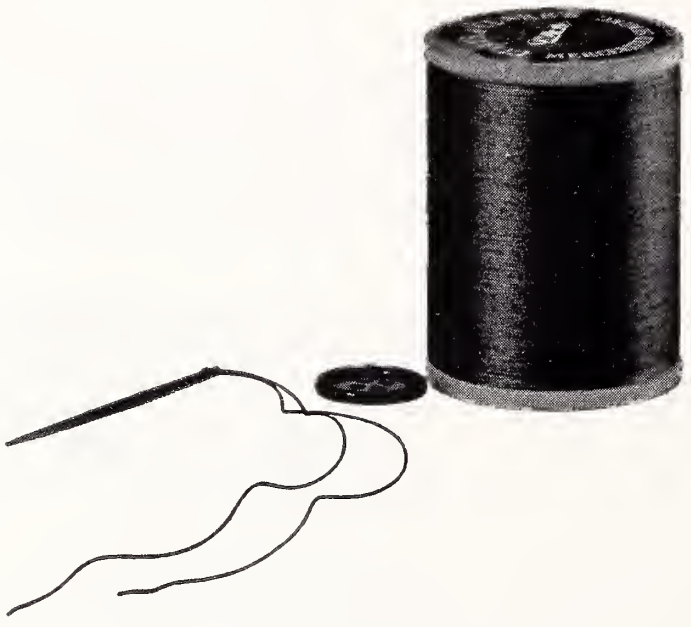

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Precautions: BAMADEX SEQUELS should be given only under close supervision to patients hypersensitive to sympathomimetic drugs, with cardiovascular or coronary disease or who are severely hypertensive; to emotionally unstable persons and to epileptics. Patients should be cautioned not to drink alcoholic beverages while on the drug, and not to drive vehicles if they become drowsy. In all patients kept on the drug for long periods, the drug should be withdrawn gradually to avoid possible serious reactions.

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ago at Franklin Avenue and 48th Street, in Des Moines, for a group of osteopaths, subsequently encountered financial difficulties, and was taken over by M.D.'s a few months ago, has been renamed Northwest Hospital. **Dr. Harold Eklund** is chief of staff; **Dr. Alfred Smith** is staff vice-president; and **Dr. James Bell** is secretary-treasurer.

Dr. Donald Preuss has been appointed by the Grundy County Board of Supervisors to serve a two-year term as county medical examiner. His partner in practice at Grundy Center, **Dr. James Scott,** was named assistant examiner.

Dr. F. N. Cole was given the community service award of the Iowa Falls Junior-Senior Chamber of Commerce at a banquet on February 3. During 30 of his 34 years in Iowa Falls, he has been city health officer and a member of the library board. He has also been a school-board member, a member of the planning commission and a director of the North Hardin Chapter of American Red Cross, and is a past president of the Hardin County Medical Society.

Dr. H. S. Frenkel addressed the Clarinda Kiwanis Club, on February 1, on recent advances in the diagnosis and treatment of heart disease.

At the February 7 meeting of the Clinton Rotary Club, **Dr. Dale Weber** discussed his experiences at Dr. Albert Schweitzer's clinic in French Equatorial Africa. Dr. Weber began general practice with Medical Associates, in Clinton, last July.

Burglars ransacked the offices of **Dr. William J. Morrissey,** a doctor of medicine, and **Dr. Louis F. Krick, Jr.,** a dentist, at 3828 and 3830 Ingersoll Avenue, Des Moines, early on the evening of February 7. The contents of files and cabinets were strewn about, but nothing of monetary value appeared to have been taken.

The physician member of the Des Moines School Board, **Dr. George Caudill,** said at the February 7 meeting of that body that in some cases lunchroom supervisors at Des Moines schools have been requiring children to eat all of the food on their trays before permitting them to leave—a practice which he called "archaic, cruel and inhuman." Moreover, he said, such a requirement foments our nation's most common health problem, overweight.

Dr. Albert E. Johann, as a young man, was appointed medical director of the Bankers Life Company, when the firm's home offices were in the Valley Bank Building, in Des Moines. He was with the Company during subsequent moves to the Liberty Building and to its present building at 711 High Street. Then he retired, and spent several years traveling and pursuing hobbies. Recently, he took a position with the Veterans Administration, in the Valley Bank Building, and his desk is in exactly the same location he occupied at the start of his work with Bankers Life.

Dr. Gene Parks opened a general practice in Centerville, on March 1, in the offices occupied until recently by **Dr. Richard Donahue,** who had been recalled to duty with the Navy. Dr. Parks is a graduate of the U. of I. College of Medicine and a native of Bloomfield. For the past six months he has practiced in Osage.

At the Kiwanis meeting in Mt. Pleasant on January 31, **Dr. Robert Wettach,** a general practitioner there, discussed the diagnosis and treatment of heart disease.

A pulmonary-function testing laboratory was opened early in February at Allen Memorial Hospital, Waterloo, largely as the consequence of a gift to the Hospital from the Black Hawk County TB & Health Association. **Dr. George Heine,** anesthesiologist and medical director of the inhalation therapy unit there, said, "The addition of this equipment will better enable us to detect pulmonary diseases, especially emphysema, and to assess the effect of treatment for those conditions. When used in conjunction with laboratory studies and x-rays, it will give the physician a more complete knowledge of all pulmonary disorders. The Tuberculosis Association is to be commended for making this equipment available to us. The type of work we shall be doing is usually found only in university centers."

Dr. Ignatius Greene, a native of Loughrea County, Galway, Ireland, arrived in Ossian, Iowa, early in February to start general practice. He is a medical graduate of the National University of Ireland, and served as an intern at Mercy Hospital, Chicago, in 1958-1959. Thereafter he returned to Ireland and spent five years as a resident in hospitals there. Most recently, he has served as a ship's surgeon. His bride of two months also comes from Ireland.

Drs. Richard L. Drury and **William F. Dippel,**

of Medical Associates, Clinton, were ordered to report on March 7 for duty with the Army Medical Corps at Ft. Sam Houston, San Antonio. Dr. Drury has practiced in Clinton since July, 1964, and Dr. Dippel since June, 1965.

Dr. James Mincks, of Bloomfield, discussed the relationship of the doctor and the clergyman in surgical cases, at the February 7 meeting of the Davis County Ministerial Association there.

At the February 7 meeting of the Rotary Club of Sibley, **Dr. F. B. O'Leary,** president of the Osceola County Heart Association, discussed heart disease.

Dr. J. W. Hudek, of Garnavillo, was guest of honor at a dinner meeting of the Clayton County Medical Society in Elkader on January 27.

Dr. Thomas C. White addressed a joint meeting of the Chariton and Centerville Jaycettes, on February 9, in Chariton. He recently announced his intention to move from Chariton to Fairfield on April 1.

The topic for the "Medical Forum of the Air" broadcast over the Des Moines public school television station KDPS-TV on February 10 was "Heart and Blood Pressure." The panelists were **Dr. Paul From, Dr. Charles H. Gutenkauf** and **Dr. Dennis H. Kelly, Jr.,** and the moderator was **Dr. Lawrence F. Staples.**

Dr. Clifford L. Rask, of Maquoketa, and **Dr. Francis S. Conway,** of Emmetsburg, have become members of the American Academy of General Practice.

During a 10-day, 30-hour course for nurses' aids, at the Elmwood Nursing Home, in Onawa, one of the instructors was **Dr. Edward M. Honke,** a Sioux City urologist. He spoke on "The Emotional and Physical Changes of the Aging."

At the February meeting of the Linn County Medical Society, in Cedar Rapids, **Dr. Don C. Weir,** of St. Louis, spoke on "Roentgen Diagnosis of Injury to the Cervical Spine." He is a clinical professor of radiology at the St. Louis University School of Medicine.

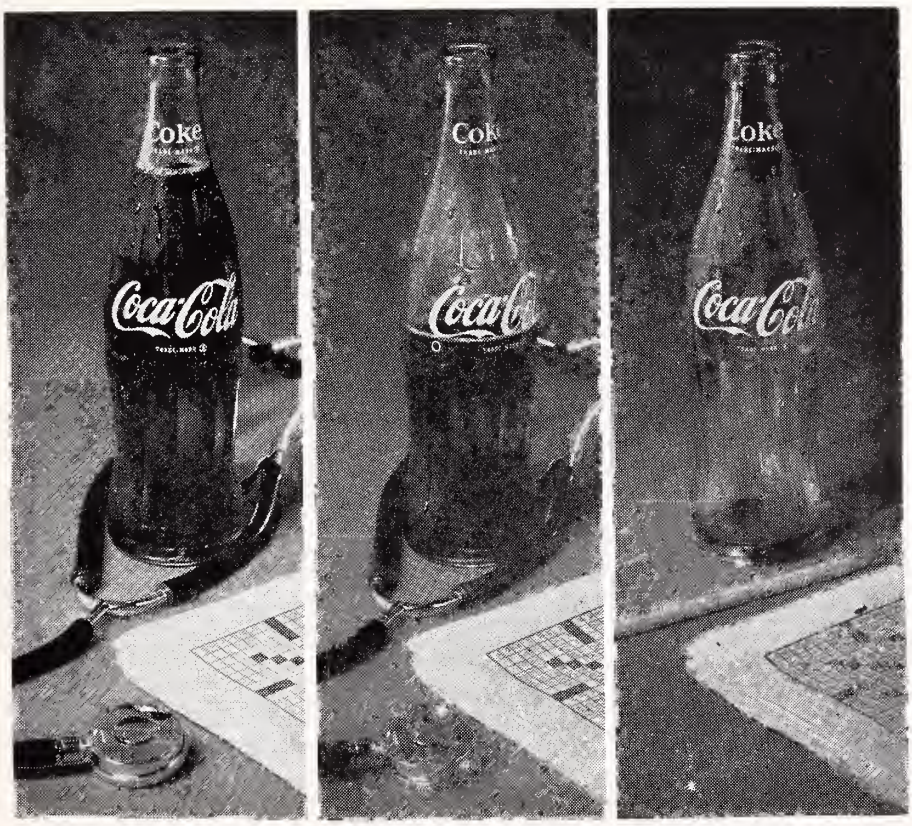

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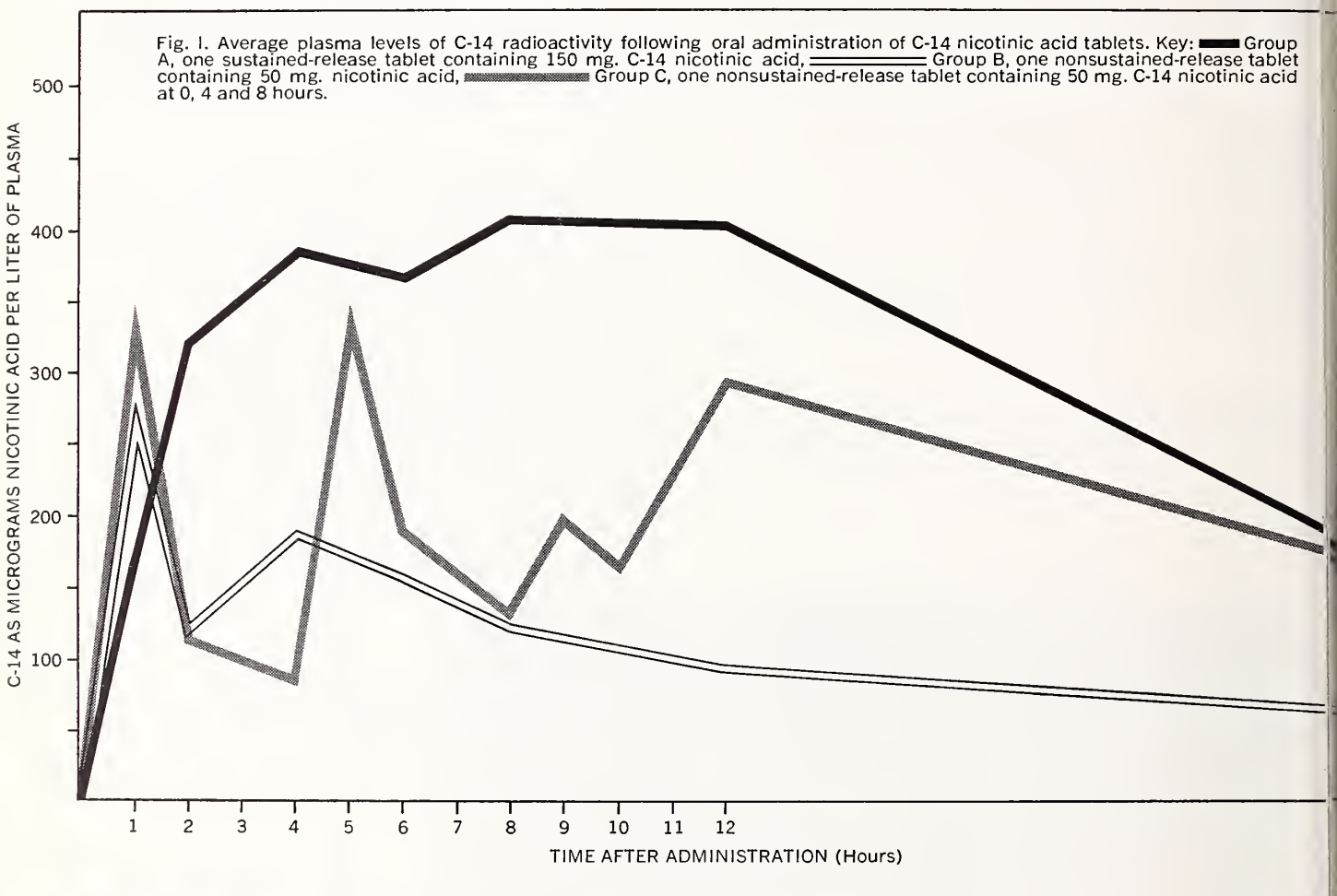
Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▒▒▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



(fewer absent doses by absent-minded patients

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

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Geroniazol TT improves the typical, unfortun signs of senile confusion. Patients become more al

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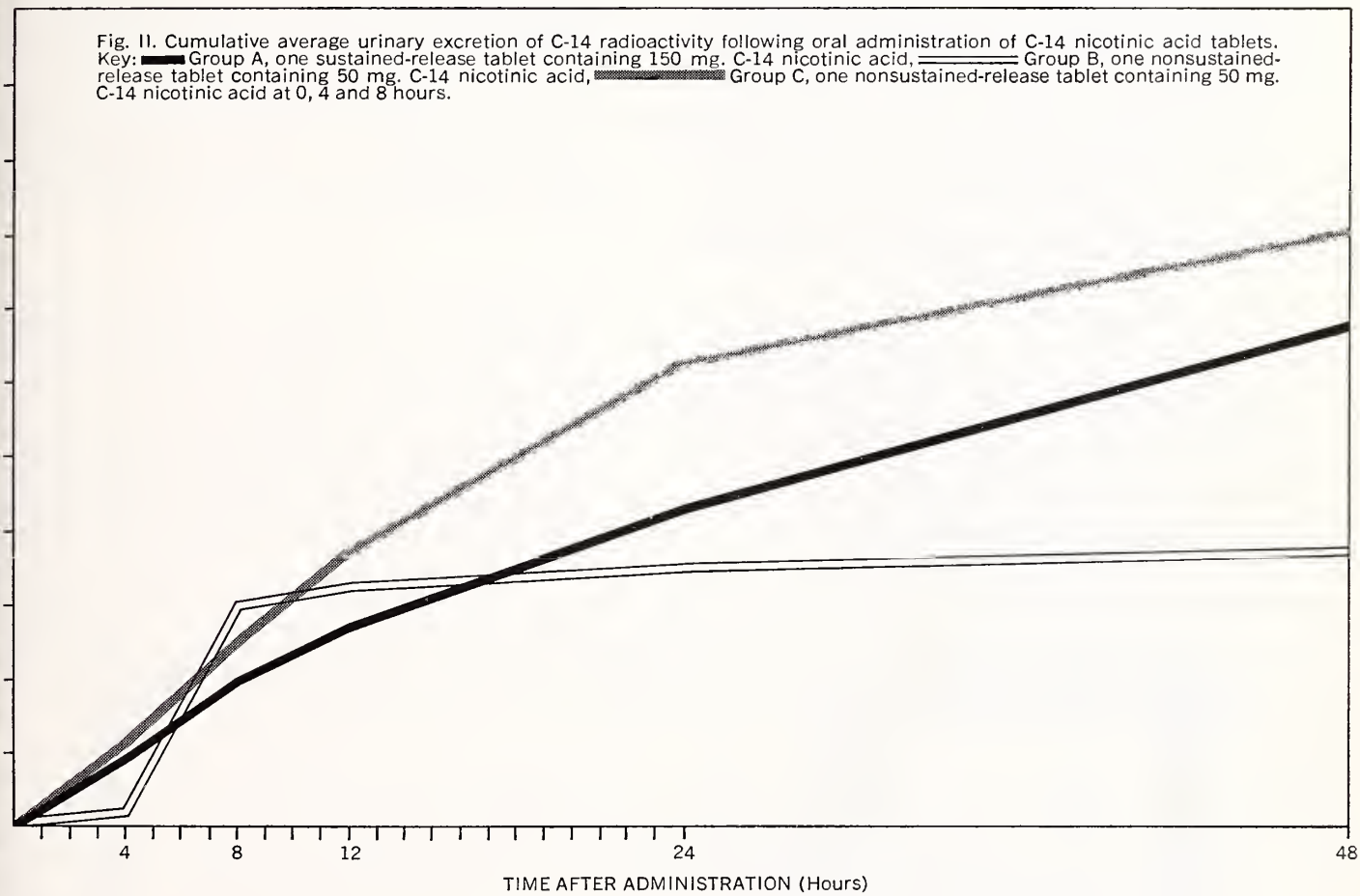

Fig. 11. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒▒▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

s confused and moody. Personal care, memory, otional stability, social attention improve. Fatigue, thy and irritability are reduced.

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Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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Dr. R. L. Lawson discussed the use of the artificial kidney at a meeting of the East Central District, Radiological Technologists Association, on February 15 at the Iowa City Veterans Hospital. Dr. Lawson is director of the Renal Dialysis Center there.

The Audubon County Medical Society appointed **Dr. R. L. Bartley,** of Audubon, to work with the County TB and Health Association in carrying out a tuberculin testing program in the schools there, during March.

At a meeting of the Mason City Association of Medical Assistants, held at the Park Clinic on February 10, **Dr. George Reichling** discussed his experiences as a Fulbright scholar in England, and explained the system of medical care in that country.

Dr. Richard Caplan, an associate professor of dermatology at the U. of I., was the guest speaker at the meeting of the Cerro Gordo County Medical Society, in Mason City early in February. At the same meeting, the physicians decided to take the initiative in forming an areawide health-facilities planning committee for North Iowa.

Dr. P. R. V. Hommel was elected president of the Elkader Central Community Hospital Stockholders, on February 10. **Dr. A. R. Powell** is vice-president.

One of the panelists for a televised discussion of venereal disease broadcast over KCRG-TV, Cedar Rapids, February 14 was **Dr. Donovan F. Ward,** of Dubuque. The others were a newspaperman, a clergyman and a representative of the State Department of Health.

Dr. Richard Waste has moved into a new office building opposite the Delaware County Memorial Hospital, in Manchester.

Dean Robert C. Hardin, of the U. of I. College of Medicine, outlined plans for a new $2.5 million health-science library at the University, at a Board of Regents meeting in Des Moines on February 10. He said that no state tax money will be involved. Contributions and grants from foundations are expected to total $750,000, and matching funds can be secured from the National Library of Medicine and

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other federal agencies. It would be housed in an addition to the proposed $10.5 million basic-science building. The present health-science library has space for only 70,000 books, and the new one would house 300,000 books.

A feature story in the BURLINGTON HAWK-EYE for February 13 pointed out that Burlington has a higher ratio of hospital beds to population than any other Iowa town except Iowa City, and has attracted six new physicians within the past 12 months. They are **Dr. George Gundrum,** a generalist; **Dr. Burton Stone,** a physiatrist; **Dr. Herbert B. Tjaden,** a urologist; **Dr. Gary Smith,** a general surgeon; **Dr. Austin R. Sandrock,** a radiologist; and **Dr. Juan Alejos,** a pediatrician.

Construction of a 22-bed Pocahontas Municipal Hospital is expected to start on about May 15 and to be completed a year later.

Two Des Moines physicians have been called for military duty. **Dr. Richard C. Schissel** reported March 4 at Fort Sam Houston, Texas, for indoctrination before overseas duty. **Dr. Abraham Wolf** was commissioned a captain in the Air Force, and reported on March 20 at Gunter Air Force Base, Montgomery, Alabama. He will have a two-year tour at Lajes Air Force Base, in the Azores.

Dr. Edgar M. Cleaver, who recently engaged in general practice in Omaha, has been appointed assistant director of the Des Moines-Polk County Health Department, in Des Moines. He took his B.A. and M.D. degrees at the University of Nebraska, did residency work in psychiatry at the Nebraska Psychiatric Institute, in Omaha, and for six months was medical director of a Job Corps Center. He will be responsible for communicable-disease control, for the mental-retardation center, for a well-child clinic, for the city employees' health clinic, and for the home care-homemaker service. Dr. and Mrs. Cleaver have two sons and three daughters.

Careers in physical therapy will be the first in a series of programs providing information about medical and paramedical careers to be pictured by the Des Moines Public Schools station KDPS-TV, which began March 30, from 8:30 to 9:00 p.m. Three types of disabilities, and rehabilitative technics for them, will be shown: paraplegia, low back pain and stroke. Actual patients will be shown undergoing treatment in the physical therapy departments at Iowa Methodist, Iowa Lutheran and

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Mercy Hospitals, Des Moines, under the direction of the attending physicians.

Dr. Sidney Sands addressed the annual meeting of Family Service-Travelers Aid, in Des Moines, on programming for mental health. About 140 people were present.

Drs. Lawrence O. Ely and **Paul R. Holzworth** participated in a panel discussion of professional ethics in medicine following a dinner at the University Christian Church, in Des Moines, on February 14. The other panelists were **Dale Miller, D.D.,** head of the Department of Religion at Drake University, and **Mr. Randy Christensen,** president of the pre-medical students at Drake.

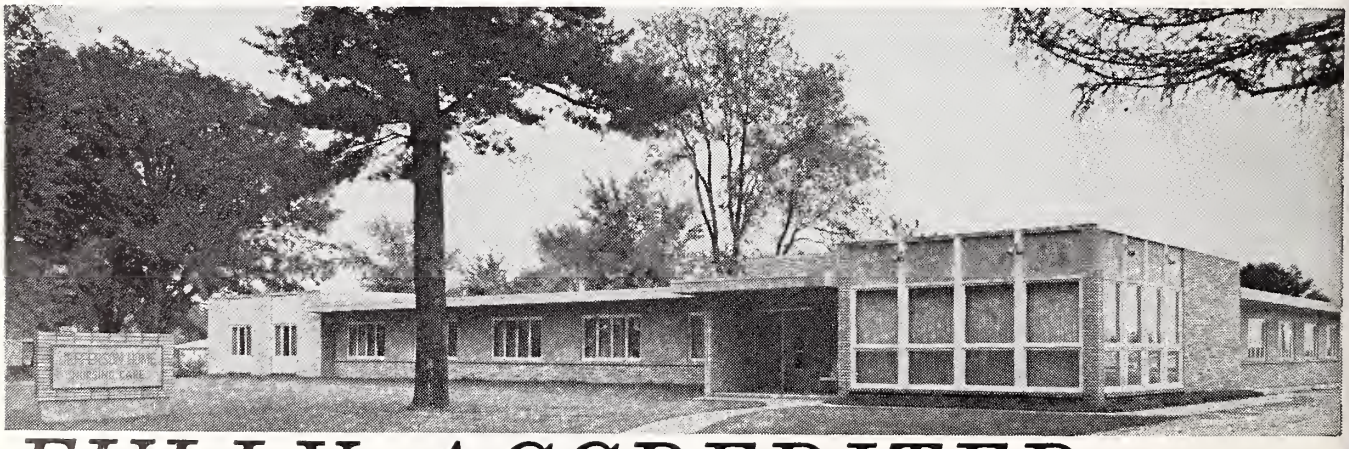
Dr. Daniel W. Coughlan has been appointed medical consultant to provide first aid to state employees in Des Moines. His office will be in the basement of the capitol building.

Dr. Roy Overton was reelected to the Board of Directors of the Des Moines Hearing and Speech Center, at the annual meeting of the organization on March 8. **Dr. Charlotte Fisk** is medical director of the Center, and the other physicians on the Board are **Drs. Julius Conner, Leonard Gangeness** and **Robert Updegraff.**

Mr. David W. Eckert, of Des Moines, a junior at the University of Washington Medical School, and **Mr. John R. Goellner,** of Coralville, a junior at the U. of I. College of Medicine, are two of 35 medical students who are to have at least 10 weeks of supervised medical experience in relatively underdeveloped areas of the world under foreign fellowship grants from Smith, Kline & French Laboratories.

Dr. Edward J. Hertko, a Des Moines internist, has been made a fellow of the American College of Physicians, and **Dr. Arthur H. Downing,** a Des Moines ophthalmologist, has been elected to the Board of Directors of the National Society for the Prevention of Blindness.

At the monthly meeting of the Iowa Home Office Life Underwriters Association, at the Elks Club in Des Moines on March 9, **Dr. Edward J. Hertko** discussed diabetes.



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The COUNCIL BLUFFS NONPAREIL printed a biographical sketch of **Dr. Isaac Sternhill** on February 22, in consequence of his being chosen as the 45th king of the Council Bluffs mardi gras. The story recounts that he was born in Roumania, that he crossed the Atlantic as a steerage passenger as a boy of four, and that he sold shoes to earn his way through college. It also lists his civic activities, including work with the Boy Scouts, the Council Bluffs Council of Social Agencies, the Christmas Seal campaigns of the TB and Health Association, and the Red Cross, as well as medical and religious organizations.

Dr. James Patrick Gould, of Des Moines, suffered a broken left leg, at about 5:00 p.m. on February 24, when the rented motorcycle he was riding collided with an automobile at Grand Avenue and Ninth Street, in West Des Moines. The driver of the car was given a ticket for failing to yield the right-of-way.

Dr. Donovan F. Ward, of Dubuque, addressed a meeting of southeast-Iowa doctors and their wives sponsored by the Wapello County Medical Society, at the Ottumwa Country Club on March 1. His topic was "Today Is Tomorrow's Illusion."

Dr. P. E. Huston, director of the Iowa Mental Health Authority and head of psychiatry at the University of Iowa, spoke at the Glenwood State School on February 24, on the treatment of depression. His was one of a series of lectures being given there by faculty members from the U. of I. College of Medicine. The meeting was open to the public.

Health officers in the Quad Cities said recently that children's pets such as small alligators and turtles had caused one death and the illness of a three-year old child, there. **Dr. J. H. Sunderbruch,** the Davenport city health officer, said that handling infected reptiles and then eating without washing constitute the usual way of contracting the disease. The infection is salmonellosis.

Dr. Ian M. Smith, a professor of internal medicine at the U. of I. College of Medicine, lectured on "The Cause of Death from Staphylococcal Infection" and conducted grand rounds at the University of Mississippi Medical School on February 23-24.

The Iowa County Board of Supervisors has appointed all of the other doctors as assistants to **Dr. Burns Byram,** of Marengo, the county medical examiner.

Dr. Gerald E. Larson, of Elk Horn, has been named by the Shelby County Medical Society to the advisory committee which is to work with the Harlan Community School District in setting up a school of practical nursing. The State Board of Vocational Education has approved the project, it is expected that 16-20 students will start their training in September, and enrollment for the 11-month course will probably be expanded to 40. Tuition will be between $200 and $275, and though the $18,000 first-year budget will be supplied in part by the School District, state-federal funds will be available for its support thereafter.

At a meeting held on February 10, the Humboldt County Medical Society elected new officers. They are **Dr. Beryl Michaelson,** president; **Dr. M. L. Northup,** secretary; Dr. Michaelson, delegate; and **Dr. Asa Arent,** alternate.

Dr. James F. Speers, head of the Division of Regional and Community Health Services in the State Department of Health, addressed the Fort Dodge Business and Professional Women's Club, on February 23, about the need for local health services and about Medicare.

A personals item in our March issue should have said that **Dr. J. J. Graham** has temporarily left **Drs. G. W. Rowney** and **E. J. Hagen,** of Sioux City, to serve in the U. S. Air Force, and that **Dr. J. D. Lutton,** of Laurel, Nebraska, is to rejoin them in their practice of obstetrics and gynecology.

Dr. Paul Seebohm, a professor of internal medicine at the U. of I., was installed as president of the American Academy of Allergy on February 22, in New York City.

Dr. Charles Swift, of Crofton, Nebraska, was elected president of the Sioux Valley Medical Association, on February 25, at the organization's annual meeting in Sioux City. **Dr. Francis B. O'Leary,** of Sibley, was named vice-president; **Dr. D. M. Youngblade,** of Sioux City, was reelected secretary; and **Dr. Karl Wegner,** of Sioux Falls, was chosen as treasurer.

A biographical sketch of **Dr. George B. Crow** appeared in the February 27 issue of the BURLINGTON HAWK-EYE, as one of a series of feature stories collectively entitled "The Face of Burlington." It mentions his work with the natives on Guam, as a Navy physician beginning in 1910, and his work

with the Red Cross and in the Burlington schools of nursing.

The topic for the March 2 meeting of the Johnson County Medical Society was "The Public-Health Aspects of Pesticides," and the speakers were **Keith R. Long, Ph.D.,** of the U. of I. Institute of Agricultural Medicine, and **Howard Bond, Ph.D.,** chief of pesticide regulations for the U.S.P.H.S.

Dr. Ralph C. Carpenter, of Marshalltown, is the author of an article, "Inhalant Allergies With Headache as the Only Symptom," which appeared in the December, 1965, issue of the JOURNAL LANCET. Because it was abstracted in the LADIES HOME JOURNAL for March, he is receiving an extraordinarily large number of requests for reprints. It is also to appear in the JOURNAL OF APPLIED THERAPEUTICS.

At Fort Dodge on February 24, **Dr. C. J. Baker** succeeded to the presidency of the Lutheran Hospital medical staff. **Dr. Don G. Bock** was chosen as president-elect; **Dr. William C. Robb,** as vice-president; and **Dr. Truman J. Anderson,** as secretary. **Dr. Paul W. Gikas,** an assistant professor of pathology at the University of Michigan Medical School, spoke on automobile-safety problems.

Dr. Marvin F. Piburn, of Des Moines, who has been serving as a medical missionary in Rhodesia, volunteered for a 60-day period of service in South Viet Nam, from March 18 to May 16, 1966.

Dr. Otto C. Della Maddalena has joined **Drs. W. A. Tice, Thomas P. Board** and **Philip R. Hastings** in the practice of psychiatry in Waterloo. Dr. Della Maddalena took his basic medical training at the University of Buenos Aires, finishing in 1954. After an internship in Argentina, he spent a year at the Alexian Brothers' Hospital, in Elizabeth, New Jersey, and served his residency at Brooklyn State Hospital, New York. He then practiced psychiatry for four years in Argentina, and for two years (1964-1965) at the Mental Health Institute in Mount Pleasant, Iowa.

Dr. William B. Bean, professor and head of internal medicine at the U. of I., is spending three weeks in March and April as the Normal Paul Visiting Professor of Medicine at Sidney Hospital and the University of Sidney, in Australia. He is to give several lectures and to participate in symposia and grand rounds at the University of Melbourne, and will also visit hospitals in Aukland, New Zealand, and to lecture at Prince Henry Hospital, at the University of Melbourne. The titles of his lectures are "Clinical Masquerades of Myocardial Infarction"; "Vascular Lesions in the Skin"; "Useful Lessons From Rare Diseases"; "An Analysis of Pain in the Chest"; and "The Gold-Headed Cane."

Three Iowa doctors began tours of duty aboard *S. S. Hope,* at Corinto, Nicaragua, on March 13. **Dr. John K. MacGregor,** a surgeon, and **Dr. John R. Utne,** a radiologist, both practice in Mason City. **Dr. David W. Furnas** is an associate in surgery at the University of Iowa College of Medicine, and is a plastic surgeon. At about the same time, **Dr. Willis A. Warner,** an assistant professor of anesthesiology at the U. of I., completed his two months of service on the ship.

Dr. J. E. O'Donnell has returned to practice with Medical Associates, Clinton, after a seven-month leave of absence for study in California.

Dr. R. F. Birge, a Des Moines pathologist and the secretary of the Iowa Medical Society, has been made chairman of a committee that is to advise the State Department of Health regarding its role in the Medicare program. Another doctor of medicine, **Dr. Elmer M. Smith,** is a member of the committee, representing the State Department of Social Welfare. The other organizations represented are the Iowa Nursing Home Association, Blue Cross, the Iowa Hospital Association, the Iowa Association of Non-Profit Nursing Homes, Blue Shield, and the Iowa Society of Osteopathic Physicians and Surgeons. The principal task for the Department of Health in Medicare is to certify hospitals, nursing homes, home health agencies and independent laboratories for participation.

Dr. Duane E. Mitchell, of Mt. Ayr, has been given a five-year certificate in recognition of his service to the Selective Service System.

Drs. Robert Sautter, Gordon Rahn and **John Ware** joined two clergymen in a discussion of venereal disease for the junior and senior classes of the Mt. Vernon High School on February 24.

Dr. G. S. Rost, of Lake City, discussed the care of hand injuries at a meeting of the Calhoun County Medical Society at Stewart Memorial Hospital, on February 23.

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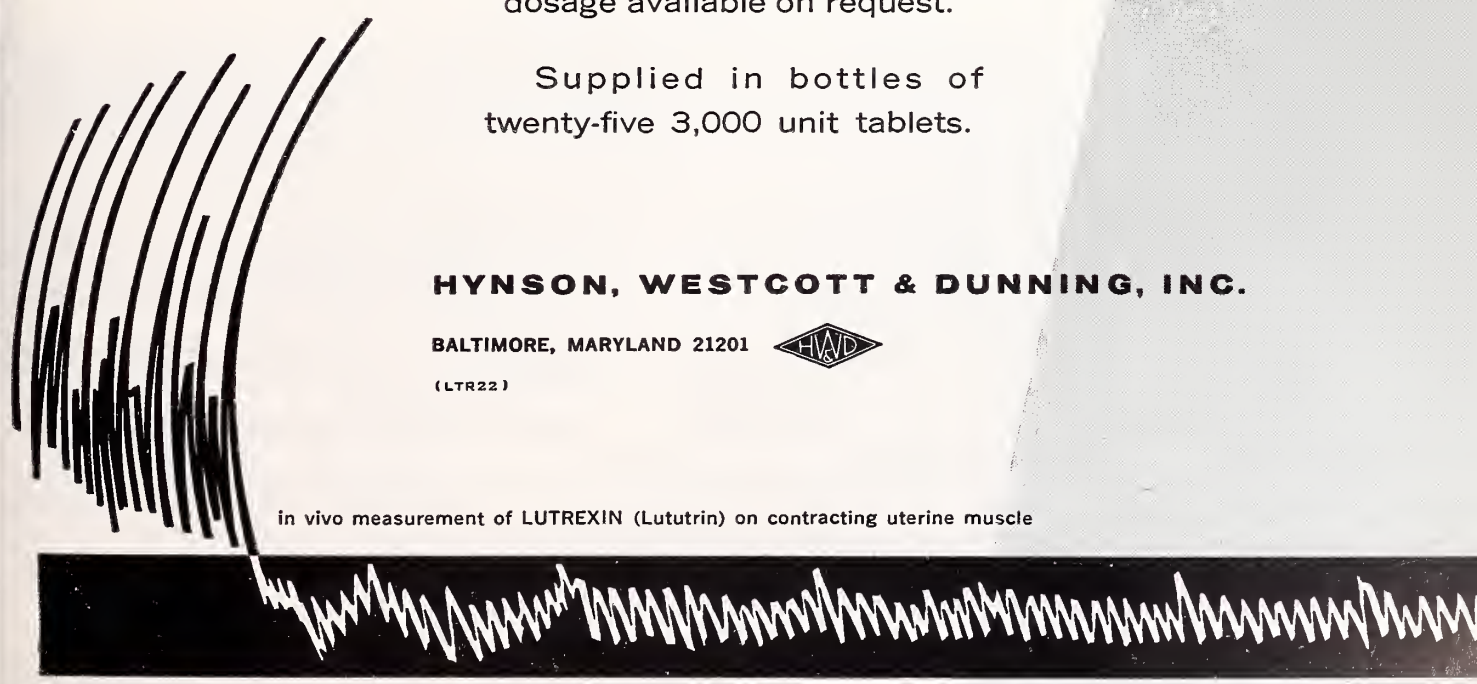

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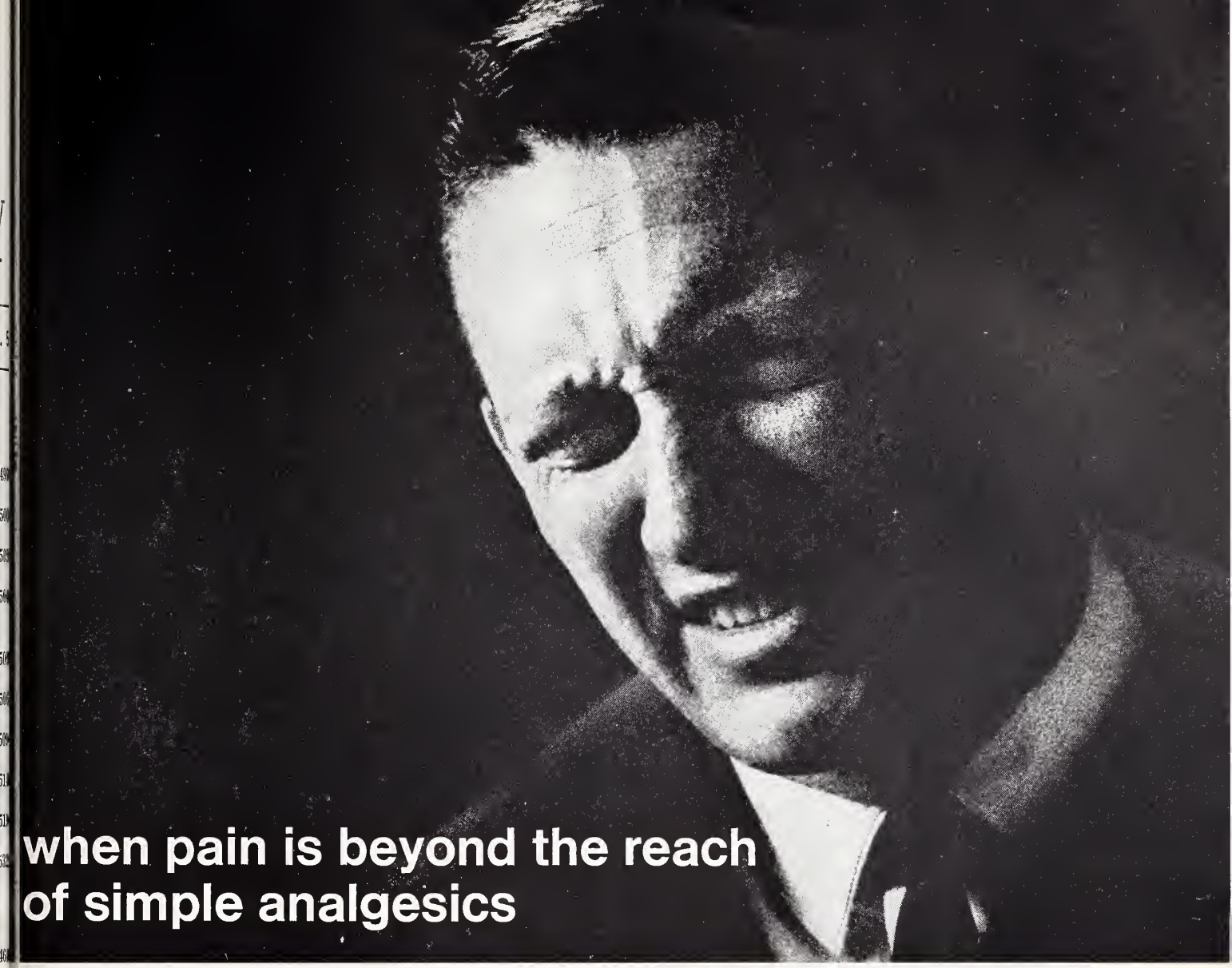

when pain is beyond the reach of simple analgesics

In the management of mild to moderate pain, give your patients comprehensive relief. TRANCO-GESIC extends the range of usefulness of aspirin by dimming pain perception—and *also* reducing mental and muscle tension.

TRANCO-GESIC®

tablets

chlormezanone 100 mg. with aspirin 300 mg.

subdues the major contributors to pain:

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- muscle tension-spasm

TRANCO-GESIC is so well tolerated it can be prescribed for anyone who can take aspirin. It is non-narcotic, and free from dangers of addiction, habituation, or dependence. TRANCO-GESIC is effective in all types of mild and moderate pain. Of 862 patients who were treated with chlormezanone and aspirin for various disorders, 88% reported excellent or good pain relief.[1]

Side effects have been minor. Occasionally gastric distress, weakness, sedation or dizziness occur. Reversible cholestatic jaundice has been reported on rare occasions. However, in 4,653 patients treated with chlormezanone, 97.7% had *no* side effects.[1] *Contraindication:* just one: sensitivity to aspirin. *Dosage:* Adults, usually 2 tablets three or four times daily. Children (from 5 to 12 years), 1 tablet three or four times daily.

1. Collective studies, Department of Medical Research, Winthrop Laboratories.

Winthrop WINTHROP LABORATORIES, NEW YORK, N. Y. 10016

The Month in Washington

Washington, D. C.—The Johnson Administration wants to prohibit manufacturers from mailing free prescription drug samples to physicians, except when they have been specifically requested. The Administration also has proposed that door-to-door distribution of samples of over-the-counter drugs also be banned. The proposals are included in new drug legislation that would expand the authority and responsibilities of the Food and Drug Administration in policing drugs.

The legislation would have Congress find that:

(1) The mass of unsolicited samples of prescription drugs supplied to licensed practitioners by manufacturers and distributors through the mails and otherwise has led to large-scale discarding and other disposal of unwanted samples which are finding their way into the hands of persons who scavenge and repack such drugs and sell them to pharmacists for dispensing on prescription in the same manner as regular stocks of drugs.

(2) Children have obtained carelessly-discarded samples.

(3) The dispensing or sale of a prescription drug sample to a patient for a fee without identification of the drug as a sample is a deceptive practice.

(4) The unsolicited distribution of nonprescription sample drugs directly to householders lacks minimum safeguards which would be involved in the sale of the drug in a pharmacy or other place of business.

Labels would have to read: "SAMPLE DRUG. FEDERAL LAW PROHIBITS ANY CHARGE OR FEE FOR THIS DRUG."

Under the legislation, the FDA would be authorized to require records and reports of adverse reactions and efficacy on all drugs now being marketed. Dr. James L. Goddard, Food and Drug Administration commissioner, already had ordered a review of drugs cleared before 1962.

Another provision of the legislation would "require certification of all drugs whose potency and purity can mean life or death to a patient," thus extending the law which now applies to insulin and antibiotics.

The Pharmaceutical Manufacturers Association expressed doubt that the FDA could carry out such an additional responsibility. PMA president C. Joseph Stetler said that it seems "unwise to propose new areas of responsibility for an agency which has not yet proven its ability to administer its present programs."

Stetler added: "The industry has said before that no amount of labeling can protect an individual who refuses to protect himself by ignoring his doctor's orders or the directions on the label of his medicine. Even when manufacturer and patient do everything right, an adverse reaction still is possible, and medical science probably never will find a way to make it otherwise.

"There is no such thing as 'miracle legislation' which automatically produces a drug utopia."

In a speech highly critical of the ethical drug industry at the annual meeting of the PMA, Dr. Goddard talked of irresponsibility. He said, "Too many drug manufacturers may well have obscured the prime mission of their industry: to help people get well." He said he had been shocked by the quality of some of the data on new drugs submitted to the FDA. There also "is the problem of dishonesty in the investigational drug stage," he said.

Dr. Goddard further charged that some drug advertisements "have trumpeted results of favorable research and have not mentioned unfavorable research; they have puffed up what was insignificant clinical evidence; they have substituted emotional appeals for scientific ones."

Stetler said after the speech that he and his colleagues feared the talk "might, unfortunately, be interpreted as an indictment of the entire drug industry, because of its overemphasis on isolated instances, without acknowledging the integrity and responsibility which our industry has consistently demonstrated."

"It is an unassailable fact," Stetler said, "that the scientific attainments and standards of performance of the American prescription-drug industry have provided an immeasurable benefit to the improvement of health and the prolongation of life."

* * *

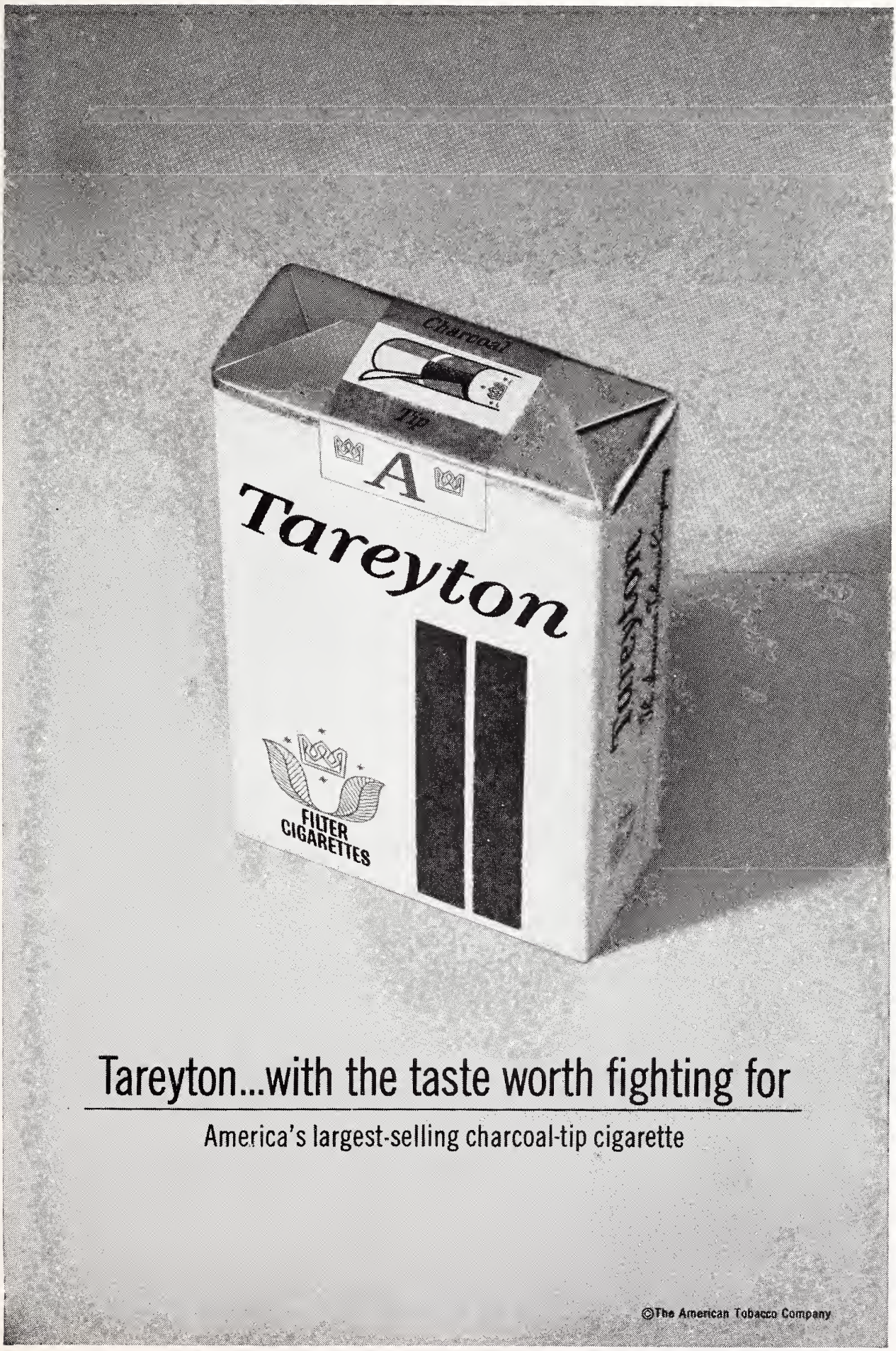
Officials estimate that the hospitalization part of Medicare will cost about $2.3 billion in the first year of the program which starts July 1.

Benefit payments under Plan B, the medical part of medicare, are estimated at $765 million for the first year. Premium collections—$3 per person per month—are estimated at $550 million, which will be matched by the federal government.

Persons 65 years of age or older have until May 31 to sign up for Plan B. The original deadline for signing up was March 31. On that date, 1.3 million of the 19.1 million persons 65 or older had not indicated whether they wanted Plan B coverage. About 16.8 million, or 88 per cent, had signed up, and one million, or about five per cent, had said they did not want the coverage.

President Johnson signed the deadline-extension sion into law at a ceremony at a federally-financed apartment project for the elderly in San Antonio, Texas, while he was spending the Easter holidays at his Texas ranch.

(Continued on page 451)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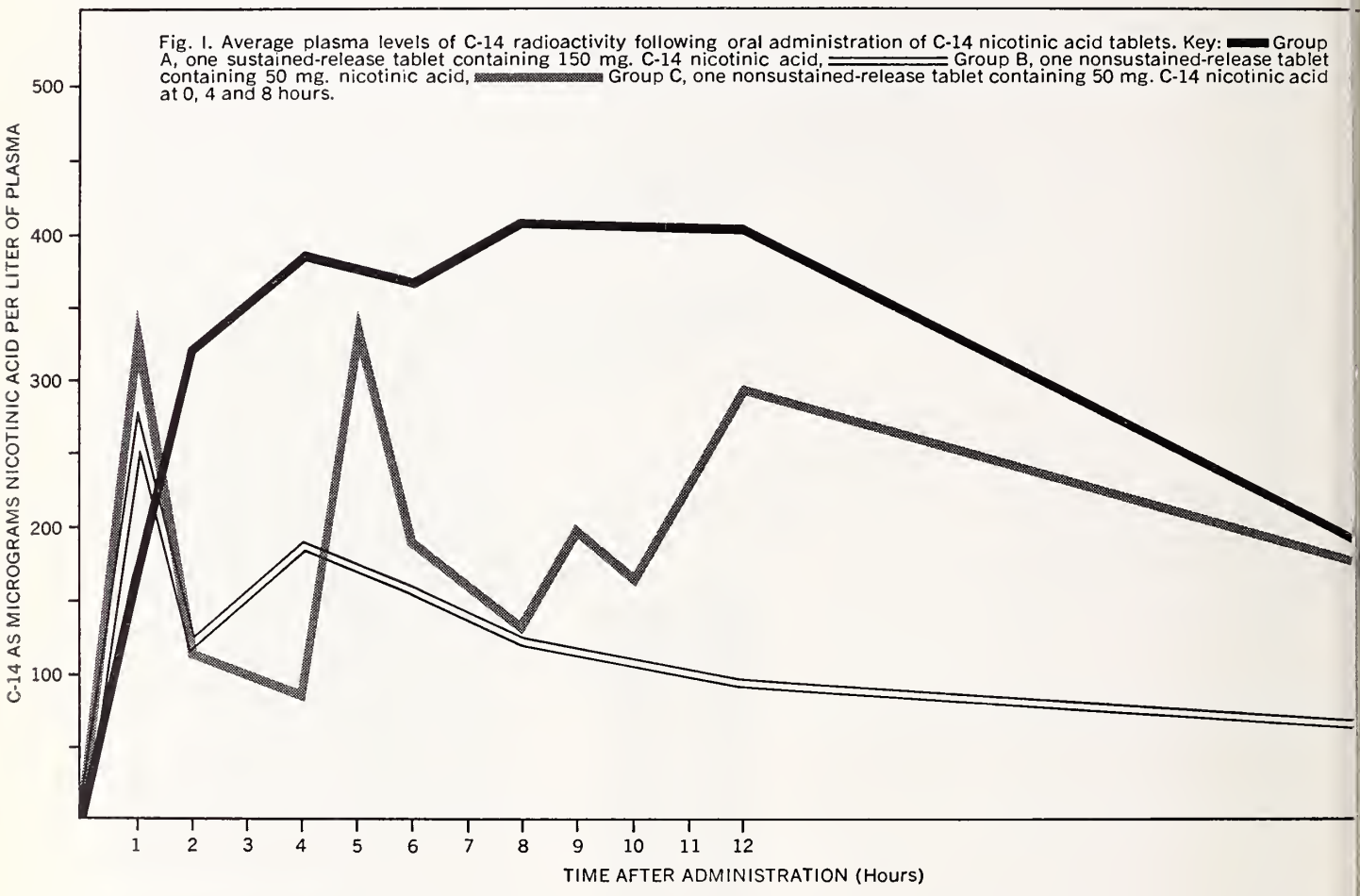
Sustained circulatory, respirato and cerebral stimulation for t

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



(fewer absent doses by absent-minded patients

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be tinuous on a daily dose of only one Geroniazol TT let every 12 hours.

The gradual release of nicotinic acid in Geroni TT will provide the well-known peripheral vasodil tion needed in patients with deficient circulation with a minimum amount (if any) of "flushing." A cerebrovascular circulation is complemented by tylenetetrazol, long-established as a cerebral and piratory stimulant.

Geroniazol TT improves the typical, unfortur signs of senile confusion. Patients become more a

ed and debilitated

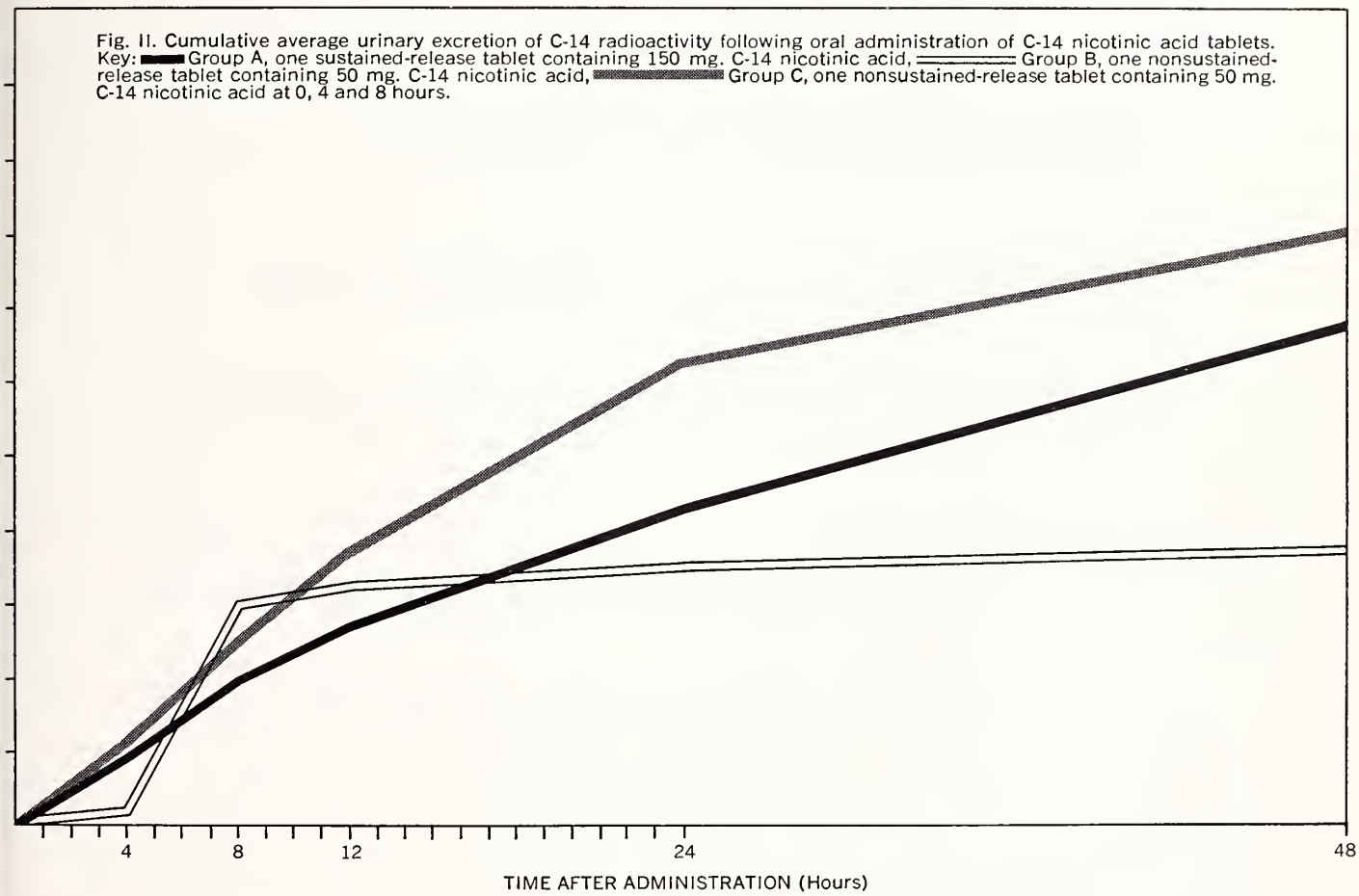


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▩ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

confused and moody. Personal care, memory, otional stability, social attention improve. Fatigue, thy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will mit your patients to enjoy the benefits of time-longed nicotinic acid/pentylenetetrazol therapy, n economical price. Dosage is only one tablet every hours.

traindications: There are no known contraindica-is.

cautions: Exercise caution when treating patients h a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
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Life Insurance

Up to $20,000* including double indemnity and waiver of premium.

Individual—non-cancellable, transferrable, guaranteed renewable and fully convertible policies, with special reduced premium rates.

* Depending on age and insurability.

Disability Income

Up to $250* per week income protection with benefits payable as long as lifetime (accident)*—to age 65 (sickness)*. Individually non-cancellable and convertible at age 70*—with special reduced premium rates and added reduction to members under age 40.

* Subject to age, insurability and active practice requirements.

ADMINISTRATORS

THE PROUTY COMPANY
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Rep. Durward Hall, M.D. (R., Mo.), reported that a poll of his constituents showed them overwhelming against extending medicare to persons of all ages. Of 13,760 persons replying to a questionnaire, 86.3 per cent said "no" to the question: "Do you favor increasing Social Security taxes to finance a compulsory medical program for the entire population?" "Yes" answers totaled 11.2 per cent, and 2.5 per cent didn't answer the question.

* * *

The federal government received segregation complaints against about 320 hospitals after a special policing agency was set up in the Department of Health, Education and Welfare.

Dr. Philip R. Lee, HEW Assistant Secretary for Health and Scientific Affairs, said that about 100 of the complaints were settled by negotiation with the hospitals. "This leaves us with pending complaints against approximately 220 facilities, most of which have been investigated and found to be out of compliance and therefore ineligible for new federal funds," he said.

* * *

President Johnson has ordered that steps be taken to give rehabilitation aid to more of the disabled persons on public welfare. In a letter to HEW Secretary John Gardner, President Johnson noted that the federal budget for fiscal 1967 would provide for vocational rehabilitation training for 215,000 handicapped persons, a 25 per cent increase over the present year, and he added: "As we plan for the larger program, I believe we should do better than we have in rehabilitating persons who are now on our public welfare rolls. In the last several years, although the absolute numbers have increased, the proportion of welfare recipients receiving training has declined from 15 per cent to 13 per cent. I think this trend should be reversed. . . . I would like you to review the possibilities in this area and report to me with recommendations for federal and state action by June 1."

Workshop on Preschool Vision Screening

The Iowa Society for the Prevention of Blindness and the Division of Maternal and Child Health of the State Department of Health, are co-sponsoring a two-day Preschool Vision Screening Workshop to be held in Des Moines at the Hawley Building, 700-6th Avenue, May 4 and 5 from 9 a.m. to 4 p.m. each day.

This workshop is being conducted to meet the requests from approximately 60 Iowa communities for preschool vision screening programs such as the ones presently being conducted by the Iowa Society for the Prevention of Blindness in Des Moines, Waterloo and Mason City.

The workshop is open to all interested persons in the state. Alson Braley, M.D., head of the Department of Ophthalmology, University Hospitals, Iowa City, will be kick-off speaker. The training of volunteers will be conducted by Betty Marvin, field consultant of the National Society for the Prevention of Blindness. Mrs. Gerald Hilton, executive director of the Iowa Society, will explain procedures for setting up such a program.

Plans for this workshop have been made in cooperation with the Iowa Public Health Nursing Association, and county public health nurses will be urged to attend from each of the counties that are planning such programs.

Volunteers will be taught to check the child's visual acuity by means of a Snellen "E" chart. The children will be taught to play a table game pretending that the letter "E" is a table and will be asked to indicate which direction the legs of the table are pointing on the chart, thus enabling personnel to check his vision, even though he cannot read.

If the youngster's performance gives evidence of a vision difficulty, he will be "referred." In other words, the parents will be notified, in writing, of the child's need for a complete professional eye examination. Subsequently, each referral will be followed up to insure that the child has undergone the necessary examination.

Before such a program can be undertaken, it must have the approval of the county medical society. Each program is under the direction of a project advisory committee, composed of representatives from community groups that will be affected by the program, such as doctors, local health officials, nurses and volunteer chairmen. This committee will set up the criteria for referral, and will give direction and supervision to the program.

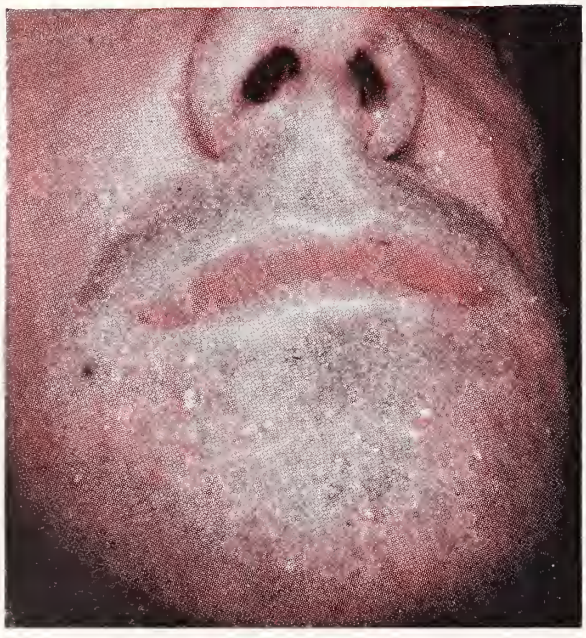
When the child is referred for an eye examination, the parent is given a professional report form to take to the doctor. This is filled in by the doctor and returned to the public health nurse. Once a year, reports are made of all preschool vision screening being done in the United States. The results of these reports are compiled by the National Society for the Prevention of Blindness and make up the only available statistics on the early incidence of eye problems in children.

This screening program is primarily directed to three-, four- and five-year-olds, in an effort to find eye defects early. Much of the interest in starting these programs has come from recent magazine and newspaper articles dealing with amblyopia ex anopsia, and with the importance of finding this condition early. If undetected and uncorrected, such a condition can lead to permanent loss of vision in the affected eye.

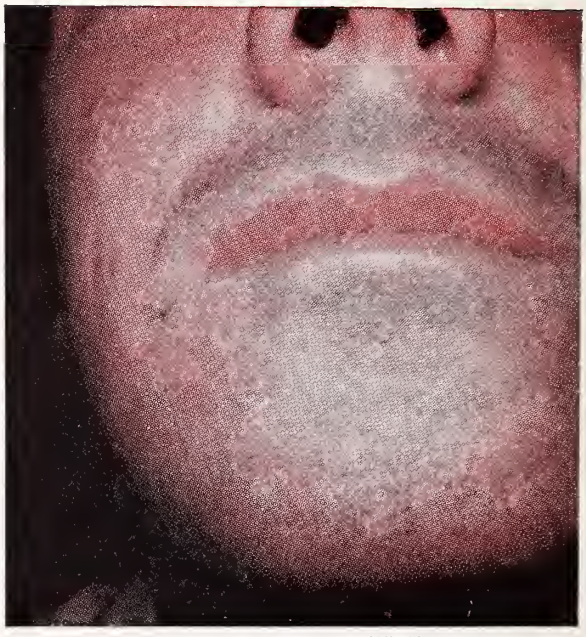
The Iowa Society is establishing three other new programs this spring, with the volunteers being trained locally by Betty Marvin of NSPB. These new programs are in Davenport, Muscatine and Howard Counties.

TOPICAL TREATMENT

TYPICAL RESULTS



PRIMARY PYODERMA



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Polymyxin B-Neomycin-Bacitracin OINTMENT

Each gram contains:

'Aerosporin'® brand Polymyxin B Sulfate ..... 5,000 Units

Zinc Bacitracin ..... 400 Units

Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) ..... 5 mg.

Tubes of ½ oz. and 1 oz.

- clinically effective
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For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

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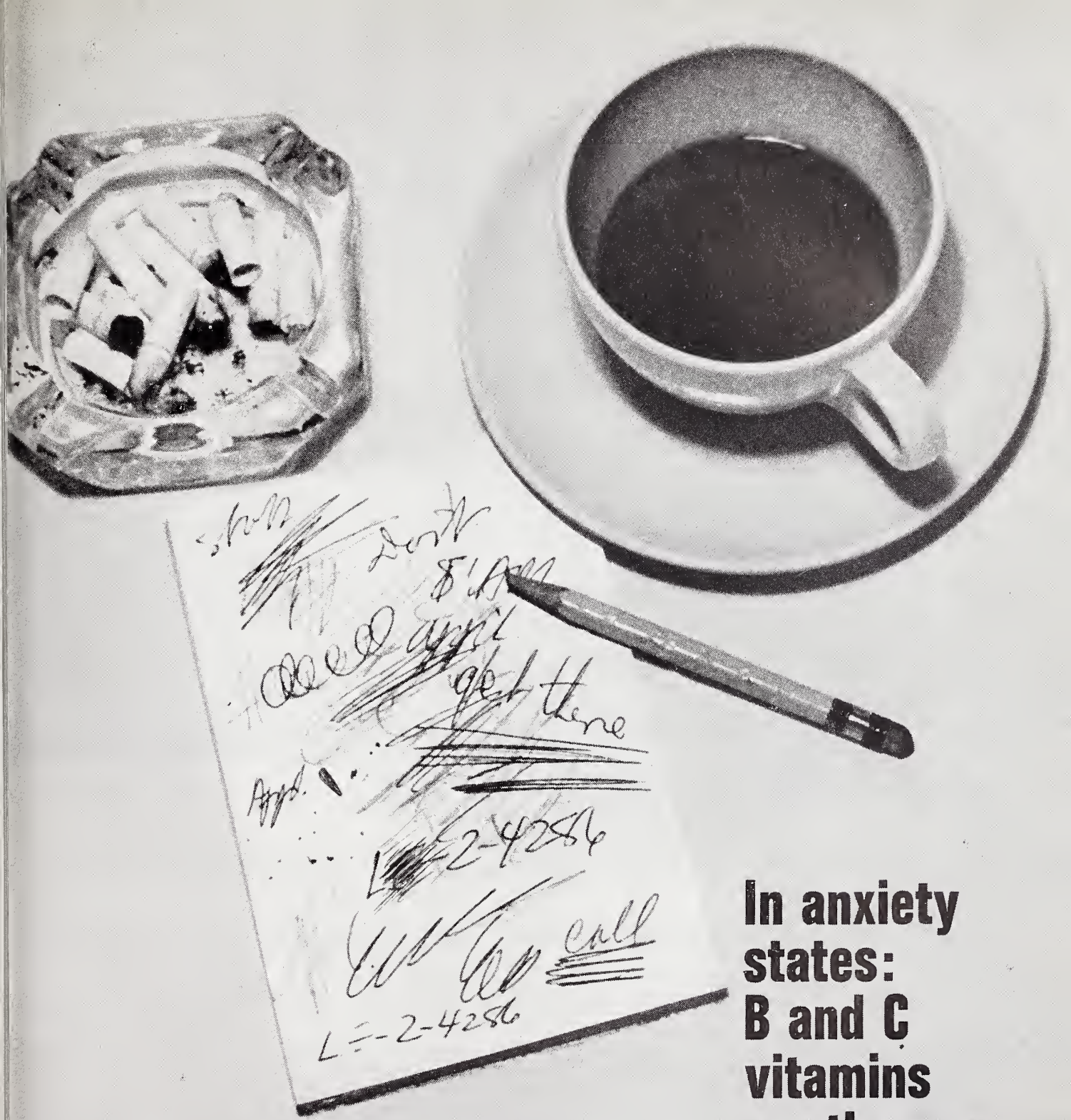

In anxiety states: B and C vitamins are therapy

tress formula vitamins are an important supportive measure in main-ining the nutritional status of the emotionally disturbed patient. With TRESSCAPS, B and C vitamins are present in therapeutic amounts to meet creased metabolic demands. Patients with anxiety, and many others under-oing physiologic stress, may benefit from vitamin therapy with STRESSCAPS.

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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When uncontrolled diarrhea brings a call for help

When the diarrhea sufferer has run e
gamut of home remedies without succe
pleasant-tasting CREMOMYCIN can ans
the call for help. It can be counted or
consolidate fluid stools, soothe intesti
inflammation, inhibit enteric pathoge
and detoxify putrefactive materials—u
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CREMOMYCIN combines the bacteriosta
agents, succinylsulfathiazole and neor
cin, with the adsorbent and protective
mulcents, kaolin and pectin, for comp
hensive control of diarrhea.

Indications: Diarrhea. *Contraindications:* Kac
Withhold if diverticulosis is present or suspec
Precautions: Sulfonamide: Continued use requ
supplementary administration of thiamine and

your ℞ for Cremomycin can provide relief

m K. Neomycin: Patient should be observed for
v infections due to bacteria or fungi. *Side Effects:*
S fonamide: Sensitivity reactions may occur (e.g.,
n rashes, anemia, polyneuritis, fever; agranulo-
osis with a fatal outcome has been reported).
Reduction of thiamine output in the feces and of
vamin K synthesis has been observed. Neomycin:
Nausea, loose stools possible.
Before prescribing or administering, read product
circular with package or available on request.

romptly relieves diarrheal distress

Cremomycin®

NTIDIARRHEAL

Composition: Each 30 cc. contains neomycin sulfate
50 mg. (equivalent to 210 mg. of neomycin base),
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Gm., pectin 0.27 Gm.

MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

Where today's theory is tomorrow's therapy

The Doctor, the Clergyman and the Terminal Patient

A dramatic presentation of how the clergyman and the physician can work together to help a family face the problem of the terminal patient will be featured at a special program on medicine and religion at 8:15 p.m., Sunday, June 26, at the Palmer House Hotel, as a part of the 115th annual convention of the AMA, June 26-30, in Chicago.

The program will be open to all physicians and clergymen and their wives, and to the public, said The Rev. Dr. Paul B. McCleave, director of the sponsoring unit, the Department of Medicine and Religion of the American Medical Association.

The presentation will be an original drama, "Truth Is Like Yellow," written especially for the occasion. The drama will probe the emotional problems facing the family, the physician and the clergyman in the case of a terminally ill patient.

Following the presentation a panel of two ministers and two physicians will discuss the implications raised by the drama. The drama will be presented by professional actors. The panelists will be P. John Robechek, M.D., Cleveland, Ohio, surgeon; David B. Allman, M.D., Atlantic City, N. J., surgeon and a past-president of the AMA; Rt. Rev. Msgr. John S. Quinn, Chief Justice of the Tribunal of the Archdiocese of Chicago, and The Very Rev. David Loegler, dean of Trinity Cathedral, Cleveland, Ohio.

Scientific Session Iowa Heart Association

Hotel Fort Des Moines, Des Moines, Saturday, May 14

9:30 a.m. "Management of Cardiorespiratory Insufficiency"—Khalil A. Feisal, M.D., visiting assistant professor of internal medicine, U. of I.

11:50 a.m. "Coronary Risk Factors and Approaches to Prevention of Clinical Heart Disease"—Jeremiah Stamler, M.D., director, Heart Disease Control Program, Chicago Board of Health

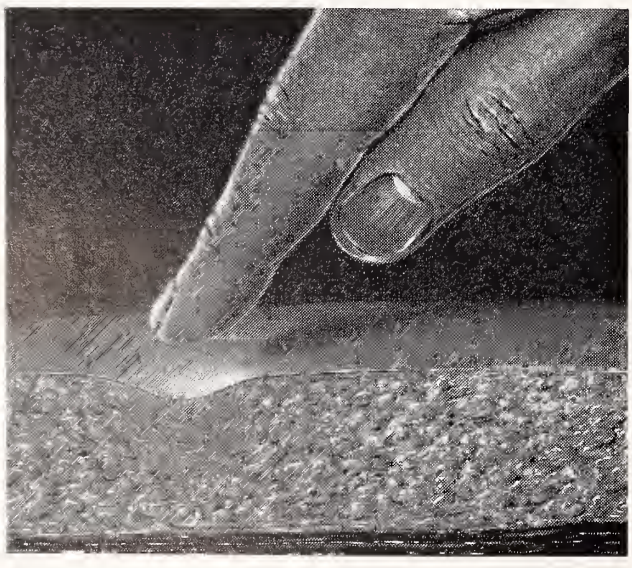
12:00 noon LUNCHEON
"Trends in Public Health Policy and Practice in Iowa"—Arthur P. Long, M.D., Commissioner of Health

2:00 p.m. "Coronary Artery Disease and the Law"—Francis F. Rosenbaum, M.D., assistant clinical professor of medicine, Marquette University, Milwaukee

3:00 p.m. "Intensive Cardiac Care Unit"—John A. Callahan, M.D., associate professor of medicine, University of Minnesota, Minneapolis.

For prompt, emphatic diuresis

AQUATAG®
(BENZTHIAZIDE)



NEW FROM TUTAG for prompt, comfortable diuretic action with a balanced excretion of sodium chloride and a lower potassium loss under normal dosage and diet regimen

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia, hypochloremic alkalosis and hyponatremia may occur. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Insulin requirements may be altered in diabetes.

WARNINGS: Dosage of coadministered antihypertensive agents should be reduced by at least 50%. Use with caution in edema due to renal disease; advanced hepatic disease or suspected presence of electrolyte imbalance. Stenosis or ulcer of small intestine have been reported with coated potassium formulas and should be administered only when indicated. Until further clinical experience is obtained, the use of the drug in pregnant patients should be carefully weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or disfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties.

Before prescribing or administering, read the package insert or file card available on request.

Available as 25 or 50 mg. scored tablets.

Request clinical samples and literature on your letterhead.

S.J. TUTAG & COMPANY
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the sedentary life is often the seat of low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ **to relieve pain** ☐ **to relax muscles** ☐ **to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

for the relief of low back sprains and strains

SOMA®
(CARISOPRODOL)

Wallace Laboratories, Cranbury, N.J.
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Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

In rheumatoid arthritis—effective ther with minimal chance of G-I upset

Therapeutic Effects
Fifty to 75% of patients obtain major relief of arthritic symptoms, as reported by numerous clinicians. In addition, the problem of gastric upset—a major problem with certain other oral antiarthritic agents—is minimized by the presence of antacids and an antispasmodic in the formulation.

Improvement is generally seen within 3 to 4 days, and trial therapy need not be continued beyond a week. Relief of pain is followed quickly by resolution of inflammation and improved joint function. Relief of symptoms is often accompanied by increased appetite, gain in weight and an improved sense of well-being.

The initial response is usually maintained without dosage increases; indeed, initial dosage is often reduced for maintenance purposes.

Salicylate or steroid therapy can usually be diminished or, in some instances, eliminated.

Contraindications
Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time.

Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid rea have been reported but cannot defi attributed to the drug. Thrombocyto purpura and aplastic anemia are als sible side effects. Confusional state agitation, headache, blurred vision, neuritis and transient hearing loss h been reported, as have hepatitis, ja and several cases of anuria and her With long-term use, reversible thyro hyperplasia may occur infrequently

Average Dosage in Rheumatoid Art
Initial: 3 to 6 capsules daily in divide It is usually unnecessary to exceed sules daily. A trial period of 1 week i quate to determine response; in the of favorable response, discontinue.

Maintenance: An effective level is o achieved with 1 to 2 capsules daily; exceed 4 daily.

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Years of clinical use have established phenobarbital as one of the most efficient and highly regarded sedatives. In fact, for general sedation it is the drug of choice.[3] In Donnatal, phenobarbital potentiates the spasmolytic effects of the belladonna alkaloids, lessening emotional tensions and checking the neurogenic impulses that trigger GI disorders.

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Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

IN EACH TABLET, CAPSULE, OR (5 cc.) OF ELIXIR

hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
phenobarbital	(1/4 gr.) 16.2 mg.

(warning: may be habit forming)

IN EACH EXTENTAB

hyoscyamine sulfate	0.3111 mg.
atropine sulfate	0.0582 mg.
hyoscine hydrobromide	0.0195 mg.
phenobarbital	(3/4 gr.) 48.6 mg.

(warning: may be habit forming)

BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

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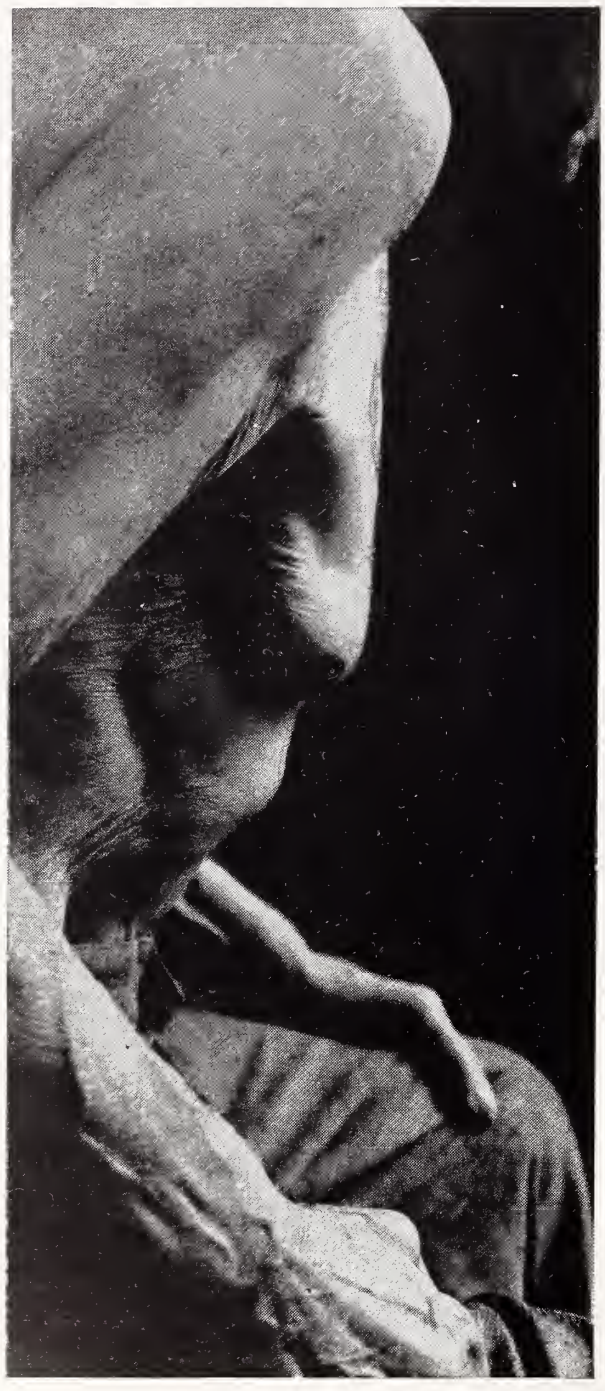

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Medicare—How We Have Learned to Live With it

LEWIS BRAND, M.D.
Saskatoon, Saskatchewan

It seems like many years since the Saskatoon Agreement was signed and private practice as it had been known in Saskatchewan became nothing but a memory. Just to refresh the recollections of those of you who heard about our trials and tribulations, let me tell you that on July 1, 1962, the doctors throughout the province, almost to a man, closed their offices because they felt they could not practice under the restrictive type of legislation that had been promulgated by the first and only socialist government in North America.

As you will recall, we had prepared for that eventuality for many months. We had established emergency services in many of our major hospitals throughout the province, and anybody who required a physician's attention during the days of the "strike," as the press called it, were to go to the nearest hospital where adequate facilities were maintained. The emergency service and how well it worked are now a matter of history. The press has played up a couple of cases where it was alleged that inadequate service was provided and that disastrous results ensued. However public investigation has shown that those were cases in which the outcomes under the best of circumstances would have been unfortunate for the patients concerned. One, for example, was a case of meningococcal meningitis in a youngster whose parents had not recognized him as seriously ill until he was *in extremis*. Actually, our service worked exceedingly well.

Meanwhile, the Council of the College of Physicians and Surgeons of Saskatchewan and the representatives of the Government of Saskatchewan were having meetings under the aegis of the British Labour peer, Lord Stephen Taylor. It is important to remember that the College of Physicians and Surgeons made two major concessions: (1) The College conceded the right of government to levy taxes for health purposes. (2) The College conceded universality. These major concessions, which have had a tremendous effect on medical care plans throughout Canada, were the basis for the final Saskatoon Agreement of July 23, 1962, and the legislation which subsequently affirmed it.

Dr. Brand is a general practitioner and a member of the Parliament of the Dominion of Canada. He gave this address in Sioux City on February 24, 1966, at the annual meeting of the Sioux Valley Medical Association.

OCCURRENCES BETWEEN 1962 AND 1966

There were two immediate results of the medicare crisis, and the difficult years that preceded July, 1962. First, most doctors felt that their basic enjoyment of the practice of medicine had been impaired by the intensity and the emotionalism of the struggle. Although most of us went back immediately to our practices, and the rush of patients who had been waiting for the end of the dispute, we practiced with a sense of vague disquiet as to what we were doing, and certainly without the enthusiasm which had marked our work prior to that date. The bitterness of the struggle remained, and some patients who resented the feelings that some of us had expressed during the medicare dispute transferred their allegiance to the socialistically-oriented doctors who staff what are known as the community clinics.

The community clinics were a direct offshoot of the government's attempt to provide an answer to organized medicine, and they became established in numerous areas throughout the province, but primarily in Saskatoon and Regina, our major cities. They were staffed largely by physicians imported from Great Britain and other countries such as India and Formosa. The clinics are basically cooperative units where the facilities are owned by what are referred to as "citizens," but they nevertheless are largely labor-union dominated. The staff physicians are paid salaries either by government or by the sponsoring group, and their bills for individual services are forwarded directly to the government.

It may be helpful at this juncture to point out that as a result of the Saskatoon Agreement, the types of practice in Saskatchewan can be divided into three groups. First are those practitioners who bill direct to the M.C.I.C. and are paid 85 per cent of the schedule of fees; second are those who bill the patients, who in turn may seek reimbursement from the M.C.I.C.; and third are

those doctors who bill through one of the frameworks of our voluntary prepayment plans such as M.S.I. and G.M.S., in an effort to keep the voluntary organizations alive. The physicians last referred to, like the first group, have agreed to accept 85 per cent of the fee schedule and to forego extra-billing the patient.

The great majority of practicing physicians deal through the voluntary plans. I am one of those, but it seems to me that we have been deluding ourselves that by so doing we have avoided the tentacles of government control. Rather, we have only routed our bills through our voluntary agencies, for they, in turn, forward them to the government. We have not avoided control, but have merely delayed its application.

This, then, was the situation in 1962—doctors back in practice, mainly under voluntary plans; the community clinics in operation; and one or two, at most, working entirely outside the plan. The first problem that arose was a matter of hospital privileges for some of the imported doctors, and this became a major issue as resentment toward those physicians spread to involve a great many of the major hospitals in the province. Many roadblocks were placed in the way of those physicians in their attempts to become accredited. It is incontestable that many of them were at best very poorly qualified, and therefore their credentials were open to question. Attempts to delay their acceptance on hospital staffs became a political issue in which charges of discrimination and attempts by Government to interfere became the order of the day. The result was that legislation was passed creating an appeal board to which doctors who had been refused admittance to hospital staffs could apply for review of their cases. Well qualified doctors encountered little difficulty in obtaining privileges.

As you all know, hospital privileges are well and zealously guarded by major hospitals. We in medicine recognize that this sort of thing existed before medicare in an attempt to maintain the high standards of hospitals, particularly those in the teaching group, but the long history of carefully considering applicants for staff privileges is ill understood by people generally. With the politicians who were involved at that time, emotionality rather than rationality was the keyword.

Over the years that problem has gradually resolved itself, but even today some doctors will not talk to physicians who opposed them during the medicare controversy, and the animosity that originally existed is still present.

PRESENT CONDITIONS

The community clinics themselves have disappeared from the majority of smaller centers, but two strong ones still remain in my home city, Saskatoon, and in Prince Albert, a city to the north. Those clinics have been gradually adding specialists to their staffs in various fields such as obstetrics and gynecology, medicine, surgery and psychiatry. They have added facilities for physiotherapy, radiology and laboratory work. The staffs of those organizations are actually in a type of group practice, of course, but to hear them talk is to get the distinct impression that they, and they alone, were the originators and first exponents of that type of practice.

The original rush of patients to those clinics has dwindled, with the result that although there is a basic group of people who still support them, patients are returning to private physicians in increasing numbers. As a profession, we recognized early in the game that the only manner in which we could successfully combat that type of subsidized socialized medicine was to provide service that was superior in every respect. That, I feel, we have been able to do.

"But what," you ask, "has been the result as far as quality of care is concerned? What has been the result as far as hospitalization is concerned? And what has been the financial end result of the new system?"

First, as far as the financial aspect is concerned, we in the profession have always maintained that our gross and net incomes would be considerably higher. After all, we are paid for everything—albeit at 85 per cent of the scheduled fees. We have few if any bad debts, and the considerable cost of collection has been obviated. At first the socialists said we opposed the plan because we thought we would not make so much money. Now they exclaim, "Why did you oppose the plan? After all, we always said you would make more money."

Overutilization has become a problem. Unfortunately there are people who feel that since medicare is "free," they should partake of it whether they need it or not, and we are consequently faced with the prospect of examining patients with increasingly minor complaints such as head colds, bruised fingers and other conditions which patients usually treated for themselves or ignored prior to medicare.

This overutilization would not bother us particularly if it were not for the obvious result. Patients who are really ill or have very definitive complaints often have to wait inordinate lengths of time before they can be examined. When one chides a patient with an obvious heart condition or with a temperature of 103°F. for having sat for two or three hours in the waiting room without telling the nurse about his complaints, it is common to hear him say, "Well, there were many people waiting, doctor. I knew you were busy, and I didn't want to create any other problems for you by trying to get in ahead of somebody else."

A colleague of mine had a drastic example of this. A patient had severe chest pain and was bathed in the cold perspiration of cardiac shock.

He sat in the doctor's waiting room for two hours, until the doctor noticed his condition on one of his infrequent visits there. The man was immediately admitted to the hospital, which was only one block away, and he died there 15 minutes later.

As for quality of care, we are doing our level best to maintain it, but seeing 40 to 60 patients per day, a busy general practitioner is unable to give the type of care that every patient has a right to expect from his family physician. We do have physicians who take full advantage of the situation, of course, since the more patients they see, the more money they make.

Our hospital waiting lists have increased. Emergency beds are becoming increasingly difficult to obtain, and care even in hospitals has become perfunctory, at best.

EVALUATION

All the above cannot be blamed entirely on medicare. It can, however, be attributed to putting the cart before the horse, for if sufficient physicians were graduating yearly, and if there were sufficient nurses to staff our hospitals and sufficient hospitals to house our patients, part of the tremendous workload would be alleviated. However medicare is so expensive and the hospitalization plan we have is so expensive that sufficient funds just are not available from the tax dollar to provide the extra facilities that are essential for the practice of good medicine for the numbers of patients that we are seeing today. We have no built-in safeguards to prevent overutilization. Many have been considered, such as deterrent fees, but they have been discarded on the grounds that they would be discriminatory against the poor.

On the credit side of the ledger, there is no question in my mind about the advantage of being able to order investigations without even considering the cost to the patient. The people of Saskatchewan are undoubtedly happy with medicare—mainly, I believe, because the doctors have worked so hard to maintain their standards. After all, in many cases, it is only the doctor who is aware of deficiencies in care, and it is only his conscience that suffers when he examines someone too quickly and realizes that he may be missing some serious illness.

Speaking as a general practitioner, I must say that it has become increasingly difficult to obtain appointments with our specialists, since they too have workloads which in many instances are booked four to six months in advance. In cases of elective surgery, that may create no hardship, but you know only too well the difficulty that it poses in medical, neurologic and other problems.

I have one confession to make. During the medicare battle, I was one of those who stoutly maintained that there were no patients—or at least very few—who had failed to seek medical care because of fear of the cost. Over the last few years I have been forced to change my mind in that regard. From consultations with my fellows, I have found that there seems to be no question that we are seeing more people with serious illnesses than we ever saw before. Perhaps the fantastic workload that each practicing physician must undertake is part of the explanation, but then one must ask the question "Where have they all come from?" Our population is the same, but we see many, many more patients.

The Government has suggested that we should control the numbers we see by simply refusing appointments, but I can honestly say that in my experience that technic has failed. If a doctor has 30 to 35 patients booked in advance, he can rely on having 15 or 20 more show up at his office each day, despite the fact that they have been told firmly by the receptionist that there is no time for the doctor to see them. They have no qualms about standing in the hall or sitting in the waiting room for two or three hours. They won't go home. They will wait if it takes all night.

I used to maintain office hours from 2 to 6 p.m. Now I see patients there from 10:30 or 11:00 a.m. through the lunch hour and until 7:00 or 8:00 p.m., or even later. Of course I must do my hospital work early in the morning, and my house calls later in the evening. In our two-man office, we used to see 750 new patients a year; now we see 1,400.

Now what about governmental controls? The party in power has changed, and we now have a Liberal Government. It is roughly comparable to your Democratic Party, and there is a much greater rapport between our College and the new provincial Government. However, the College seems to be making the mistake of agreeing almost eagerly with all of the proposals brought forward by the Minister of Health. For example, all doctors have been programed into the medicare computer according to the types, locations, etc., of their practices, the numbers of patients whom they see, the frequency with which they see those patients, and the types of care that they give. Each month, every doctor's card is run through the computer to check the work that he has done in the past 30 days. If he has as few as two deviations from the norm, he is called to appear before the medical review committee to explain why he has differed from his fellows. Out of 700 practicing physicians in Saskatchewan, 126 were found last year to deviate significantly from the norm. They all had to appear, but only six had to appear before the Disciplinary Committee of the College to explain their actions or have their licenses suspended. Constant checks are made on patients and doctors alike, to see whether a doctor actually did a certain thing on a particular date, or whether the patient is seeking a refund for a service that never was performed.

So there are controls, and personally I very much resent this type of restrictive and impersonal approach to a practice as individual as the practice of medicine!

A GLIMPSE OF THE FUTURE

Unless measures are taken to allow more freedom in our practices, only mediocrity can be the result, with doctors becoming cogs in the wheel of the medicare machine. What the answer is, I do not know. In Saskatchewan, we are reconciled to the fact that medicare is here to stay. It is already spreading, in modified forms, to four other provinces, and before this session of the government of Canada, legislation will be introduced for federal payments of 50 per cent of the cost of medicare programs in our provinces. There seems every likelihood that the proposal will become law before July 1, 1967, the date of our country's centenary.

Disability Days

During the 12 months ending June 30, 1964, the civilian population of the United States, exclusive of persons residing in institutions, experienced 3.0 billion days of restricted activity due to illness or injury. The average person cut down his usual activities for 16.2 days during the year. Included in the days of restricted activity were 1.1 billion days spent in bed, or a rate of 6.0 days of bed disability per person per year.

Illness or injury caused 385.2 million days lost from work, or 5.5 days per currently employed person per year. (For the purposes of the Health Interview Survey, current employment is defined as working at any time during the two-week period prior to the week of the household interview, or having a job or business during that period.)

Children aged 6-16 missed 204.4 million days of school because of illness or injury. The average child lost 5.0 days from school.

As age increased, rates of disability days also increased. In general, the age pattern was similar for males and females, except that rates for females usually exceeded those for males. However, among males aged 45 years and over, the rate of time lost from work exceeded that for currently employed females.

Persons residing in nonmetropolitan areas had higher rates of restricted-activity days, bed-disability days, and time lost from work than did residents of metropolitan areas. The rate of time lost from school, however, was higher per person aged 6-16 living in metropolitan areas than elsewhere.

Among persons living in nonmetropolitan areas, the rates of reduced activity were about the same in farm and nonfarm sectors. Nonfarm residents had a higher rate of bed-days and of time lost from school. Farm residents had a higher rate of time lost from work than did nonfarm residents.

With increasing family income groups up to $10,000, the rates of disability days due to illness or injury declined for each type of disability except time lost from school. In the income group $10,000 and over, the rates of disability were about the same as those for persons with $7,000 to $9,999 family income.

Persons who were unemployed had higher rates of restricted activity and bed disability than did currently employed persons.

—U.S.P.H.S.: "Disability Days"

Booklet Summarizes NIMH Projects

MENTAL HEALTH OF CHILDREN—THE CHILD PROGRAM OF THE NATIONAL INSTITUTE OF MENTAL HEALTH (USPHS publication No. 1396) discusses a number of studies designed to provide technics, knowledge and services that can help reverse the rising tide of emotional disturbance in children.

The numbers of boys between the ages of 10 and 14 in the general population has just about doubled since 1950, but the numbers of boys in that age group in mental hospitals has increased sixfold. Projections for the decade 1963-1973 indicate that the number of boys in that age group in the general population will increase by 15 per cent, but the numbers of them in mental hospitals will grow by 116 per cent. Disproportionate increases are also expected to occur in the 15-24-year age bracket, the report notes.

The report describes NIMH programs in the following areas: the child in normal environment; early help for disturbed children; and intensive care and treatment necessary for rehabilitation. It also discusses the role of the community mental health center, and describes programs for training personnel in child mental health.

One research group studied 30 mothers to whom premature babies had been born and in whom no medical cause of prematurity could be found, and 30 mothers of full-term babies. The mothers of the premature babies tended to have more definitely negative attitudes toward their pregnancies and to harbor more destructive fantasies about the outcome to the baby and to themselves. The investigators developed a maternal-attitude test in an effort to learn whether prematurity can be predicted.

The report describes findings in such other areas as family therapy; education for emotionally disturbed children; social forces in delinquency; the effect on normal children of being reared in various sorts of institutions; hospitalization for emotionally disturbed children and adolescents; treating the families of delinquent boys; and evaluating community-based treatment for delinquents.

Single copies of the booklet are available without charge from the Public Information Section, National Institute of Mental Health, Bethesda, Maryland 20014.

Scientific Articles

Hip Prostheses

Fifteen Years' Experience

LELAND G. HAWKINS, M.D.
Iowa City

In 1955, Dr. Ford presented a paper in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY[5] about replacement prostheses for fractures of the neck of the femur. He pointed out that the indications as yet were not clear, that the complications were becoming increasingly evident, and that no follow-up studies had been carried out. Recently, at the University of Iowa, a follow-up was carried out on 237 consecutive prostheses which had been inserted during a ten-year period from December, 1951, through December, 1961. The mortalities in that group of patients will be compared with those in a previous study carried out here on patients with fracture of the femoral neck.[14] The complications associated with the procedure will be listed, and a long term follow-up hip evaluation of patients with primary and salvage prostheses will be reported.

HISTORY

The first femoral-head prosthesis was inserted by Dr. J. Judet in 1946. Four years later, he reported his experience with the first 300 cases,[15] and concluded that the results were sufficiently favorable to merit further study and development of his method. The Judet hip prosthesis was plastic, and after modification contained a straight metal stem. The plastic had initiated a foreign body response in the tissues surrounding the prosthesis, and the design had resulted in many mechanical failures (Figure 1). Thompson introduced the vitallium intramedullary stem prosthesis in 1952[18] (Figure 6). Moore reported on the self-locking metal hip prosthesis in 1957.[19] The intramedul-

Figure 1. Modified Judet prosthesis.

Dr. Hawkins holds a fellowship in the Department of Orthopedic Surgery at the U. of I. College of Medicine.

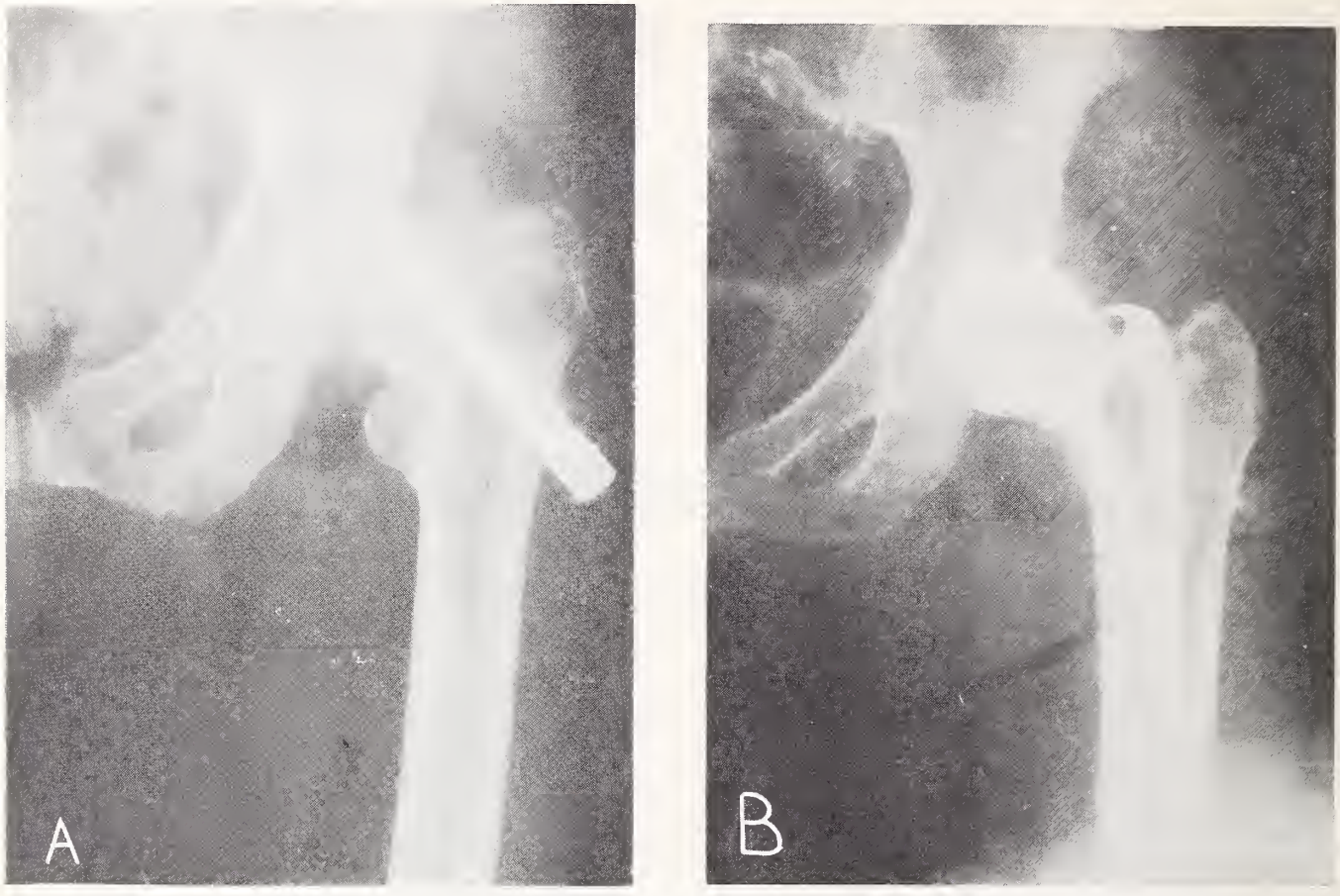

Figure 2. Non-union and aseptic necrosis following closed reduction and internal fixation. B. Salvage prosthesis.

lary stem was fenestrated to allow bone to lock the prosthesis in position. At the present time, a modified self-locking vitallium hip prosthesis is being used at the University of Iowa.

THE PATIENTS

The mortality rate in patients with fracture of the hip is definitely higher than the mean mortality rate in the general population.[16] About 80 per cent of the patients are over the age of 60,[13] and 80-85 per cent of patients with fracture of the femoral neck are women. In a follow-up study carried out at this institution and reported in 1956,[14] 199 patients over the age of 60 with fractures of the femoral neck were evaluated. The average age of these patients at the time of femoral neck fracture was approximately 75 years (Table 1).

The records show that 5 per cent of those patients died preoperatively. Following closed reduction and internal fixation, 28 per cent were dead at the end of a year. Twelve per cent had died before discharge from the hospital. Adding those figures together, we frequently state that of all patients with fractures of the femoral neck, 33 per cent will be dead at the end of a year (Table 2).

In our study of 237 consecutive operations, we found that in 200 patients a prosthesis was indicated as treatment for a fresh fracture of the femoral neck or as a salvage procedure for aseptic necrosis and/or non-union following internal fixation of a femoral neck fracture (Figures 2, 5). Thirty-four of the 200 patients were lost to follow-up, and the remaining 166 patients were evaluated. Sixty-three had had primary prostheses, and 103 had had salvage prostheses. From those 166 patients, the mortality rate at the end of one year was 22 per cent (Table 2).

Mortality rate after primary prosthesis. Of the 63 patients who had primary prostheses, 26 were dead at the end of the first year for a mortality rate of 41 per cent. The average age of those 63 patients at the time of surgery had been 79 years.

Mortality rate after salvage prostheses. Of the 103 patients who had had salvage prostheses, 10

TABLE I

AGE DISTRIBUTION OF PATIENTS WITH FRACTURE OF THE FEMORAL NECK[14]

Age (Years)	No. of Patients
60-64	25
65-69	34
70-74	38
75-79	41
80 and over	61
Total	199

were dead at the end of the first year, for a mortality rate of 10 per cent. The average age of those patients at the time of surgery had been 71 years. On the average, the salvage prosthesis was performed 14 months following the initial fracture of the femoral neck. Initial therapy had consisted of closed reduction and internal fixation.

COMPLICATIONS

The operative and postoperative complications from the insertion of prostheses have been reported. This information can be taken directly from the hospital charts. The operative and postoperative complications—infection, fractures, dislocations, and incorrect placement—in our 237 consecutive procedures were tabulated, and the incidence of each complication was calculated (Table 3). The average hospital stay for patients in our series was 28 days. A deep infection or fracture complication usually delayed the patient's discharge from the hospital.

The complications following 541 consecutive prosthetic procedures for all indications have been listed in two recently published reports,[2, 7] and those studies were comparable to our series. I have calculated the percentages for all of the com-

TABLE 2
MORTALITY FIGURES

Diagnosis	Treatment	Average Age	Number of Cases	Per Cent Dead at End of First Year	
Fracture, Femoral Neck	Closed Reduction[14] Internal Fixation	75	187	28	
Fracture, Femoral Neck	Primary Prosthesis	79	63	41	
Fracture, Femoral Neck with Non Union and/or Aseptic Necrosis	Salvage Prosthesis	71	103	10	Overall Mortality 22%

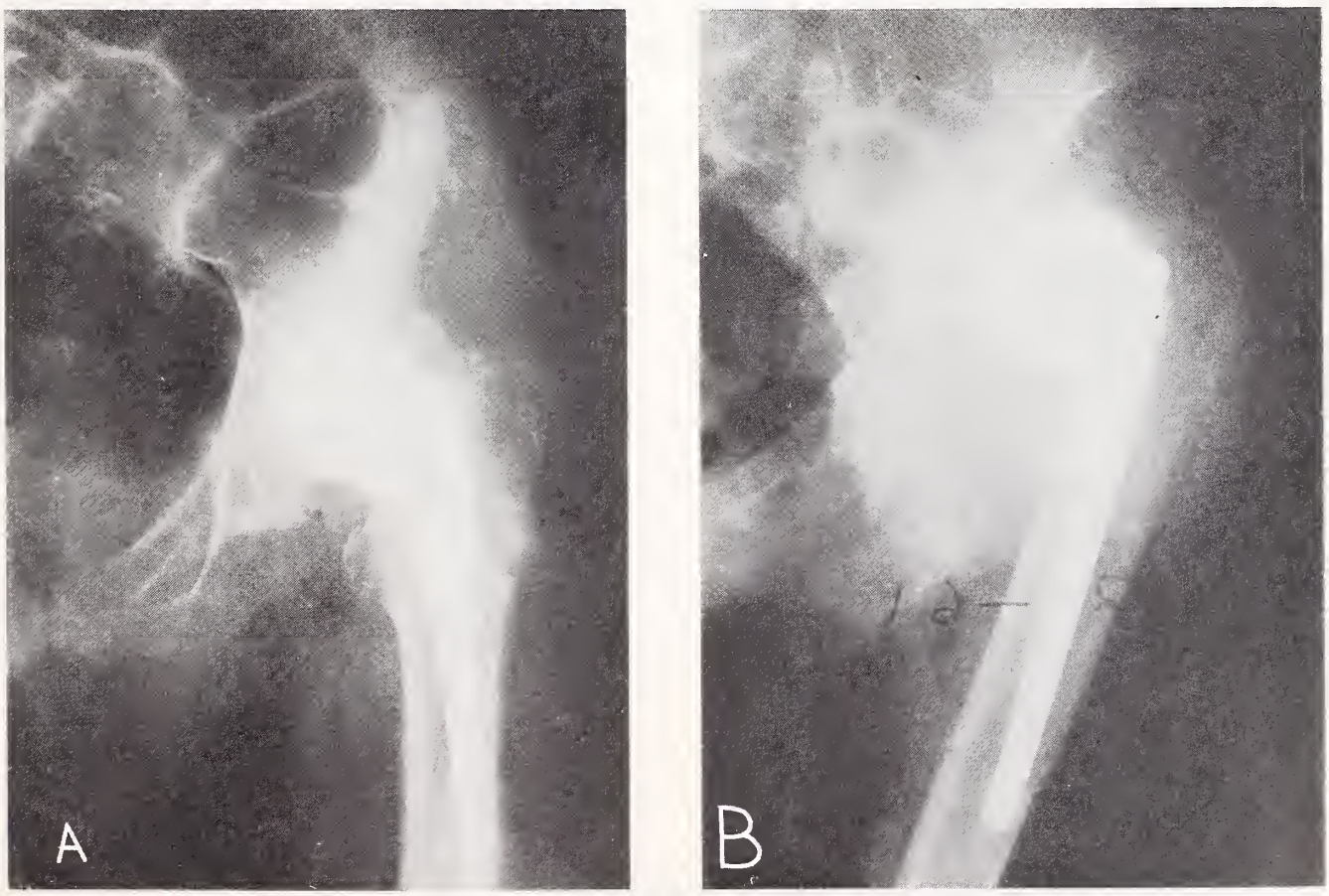

Figure 3. A. Deep infection. B. Dislocation.

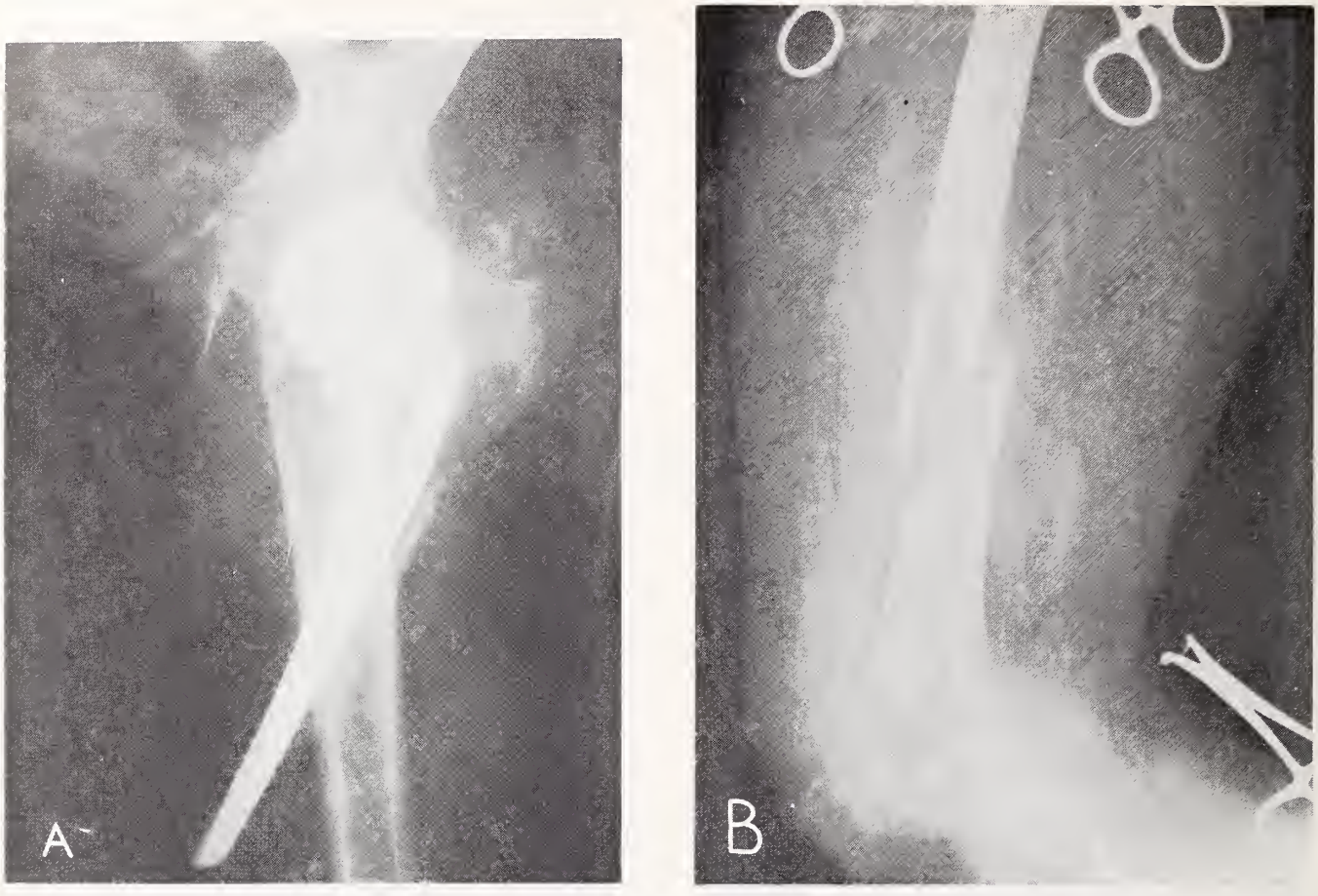

Figure 4. A Fracture at time of surgery. B. Fracture at time of surgery.

plications and have listed them in Table 3 for comparison with our statistics.

Infection. The most serious complication is infection, since it nullifies the operation and ultimately requires removal of the prosthesis (Figure 3). The deep infections which necessitated removal of the prosthesis were separated from the superficial infections and so-called draining hematomas. At the University of Iowa, the deep infection rate was 2.5 per cent, and the superficial infection rate was 7.5 per cent. In our cases there was no relationship between the age of the patient or the length of the operative procedure and the occurrence of infection.

TABLE 3

OPERATIVE AND POSTOPERATIVE COMPLICATIONS

	Iowa 237 Consecutive Cases		541 Consecutive Procedures Reported in the Recent Orthopedic Literature[2, 7]
	Number of Cases	Per Cent	Per Cent
1. Superficial infections and draining hematomas	18	7.5	3.7
2. Deep infections necessitating removal of prosthesis	6	2.5	1.1
3. Fractures	16	6.8	4.3
4. Dislocations	10	4.2	1.3
5. Incorrect placement	8	3.4	1.3

Fracture. This complication was our second most common problem. It often prolonged the hospital stay but did not interfere with the late evaluation (Figure 4). We had a fracture rate of 6.8 per cent at the time of surgery. The greatest number of fractures occurred in the salvage prosthesis group. The fractures usually occurred during the placement of the stem into the medullary canal or at the time of reduction of the prosthesis into the acetabulum.

Dislocation. This complication followed the anterior, lateral, and posterior approaches (Figure 3). The late evaluation was not affected by this. In the Iowa series, we had a rate of 4.2 per cent dislocations during the postoperative hospital stay. In a great majority of patients the treatment consisted of a closed reduction and immobilization in a satisfactory position.

Incorrect Placement of the Stem of the Prosthesis. At the University of Iowa, there was a 3.4 per cent incidence of incorrect placement. In other words, the intramedullary stem followed the old

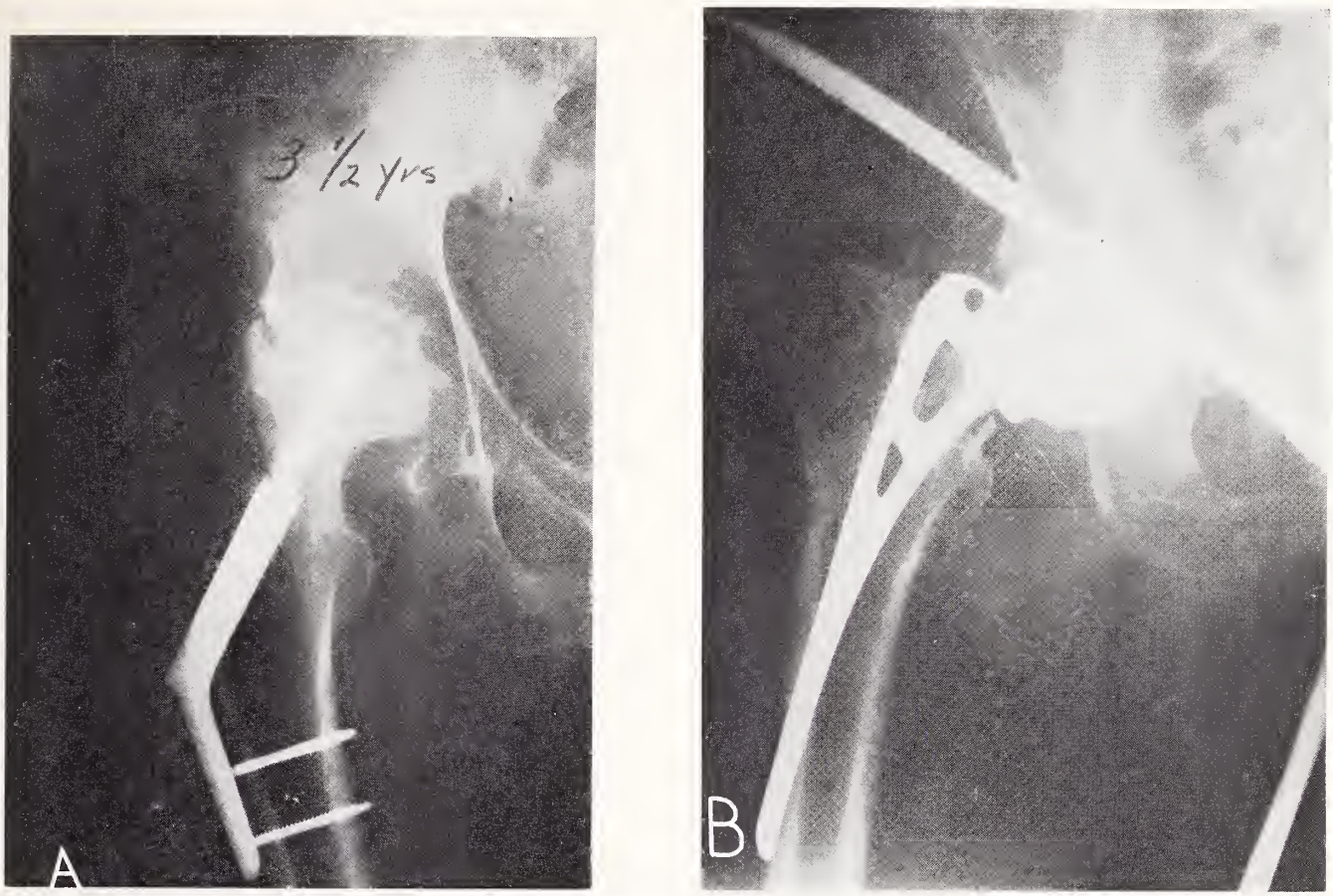

Figure 5. A. Aseptic necrosis 3½ years after closed reduction and internal fixation. B. Incorrect placement of stem through lateral femoral cortex.

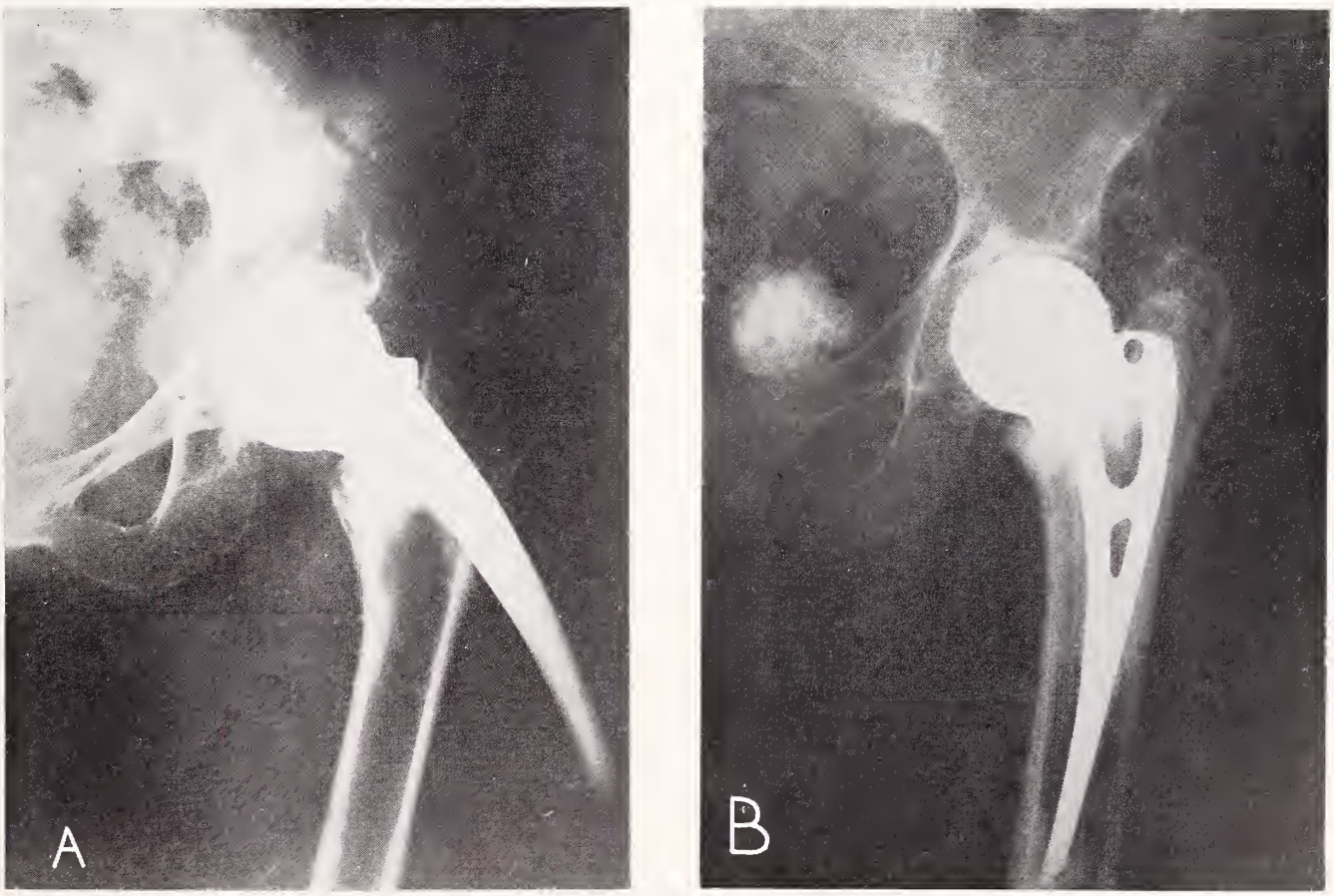

Figure 6. A. Incorrect placement of a Thompson stem prosthesis through old nail tract. B. Resorption and sclerosis around the neck and stem of a prosthesis. Myositis ossificans in region of abductor muscles.

nail hole out the lateral cortex of the femur (Figure 6) or as a result of incorrect use of the rasp, the osteoporotic femoral cortex was perforated (Figure 5). In each such case, the intramedullary stem protrudes from the femoral cortex. This complication can be avoided either by careful technic or by immediate postoperative x-rays. This complication did not alter the hip evaluations made during the final follow-up study.

Roentgenographic Changes. The x-ray changes that occur around the prosthesis include acetabular sclerosis; deepening of the acetabulum; myositis ossificans about the capsule of the hip joint; and resorption of bone about the neck and stem of the prosthesis (Figure 6). In two articles,[2, 7] we are told that of 271 prostheses which were closely evaluated for these changes, 111 exhibited changes about the prosthesis for a percentage of 40.9 per cent, and in none of the reported series could any correlation be found between the x-ray and the patient's symptoms at the time of examination.

Other Complications. Arterial injury and resultant gangrene occurred after one procedure. Two peroneal palsies were recorded. Fracture of the same femur is not an unusual late complication.[20] Hip pain that has developed after a pain-free period of time must be carefully evaluated for specific causes, such as a low-grade infection, muscle weakness, or osteoporosis.[21] Different methods of treatment have been recommended for loose-seated prostheses. In addition to a simple removal of the prosthesis, a Colonna procedure or a modified Colonna procedure with a cup should be considered. Charnley has reported the use of a cement to bind the prosthesis to the femur in the hope of avoiding the late loosening which is frequently observed on x-rays.[6] In cases of a persistently loose-seated and painful prosthesis,[3, 4] arthrodesis can be performed with the prosthesis in place.

LONG-TERM EVALUATION

Method of Evaluation. At the University of Iowa, we employ a 100-point rating scale in hip evaluations. We allot 35 points to "freedom from pain"; 35 to "function"; 10 points to "gait"; 10 points to "freedom from deformity"; and 10 points to "motion." Since pain and loss of function are the most frequent indications for operation, they are appropriately weighted. Included under function are 11 accomplishments that are considered more or less essential to normal present-day living.[17] A value of 80 or above is considered satisfactory. All patients in the University of Iowa follow-up study were examined by the author. Patients who had been operated upon during the preceding year or who could not carry out their normal functions because of senility were not given hip evaluations. The long-term hip evaluations from our series of primary and salvage prostheses are shown in Table 4.

There have been few long-term follow-ups of prosthesis patients that have included function tests, pain tests and physical examinations, partially because of the high mortality rate in the principally affected age group. In the recent orthopedic literature I was able to find 168 long-term follow-ups on patients with salvage prostheses[2, 7, 9, 10] and 146 long-term follow-ups on patients with primary prostheses.[1, 2, 7, 8, 9, 10] These patients had been examined by the authors and the listed information was comparable to that required in our study. The information from each case was transposed to our evaluation sheet, and the average figures from those follow-ups are listed in Table 4.

Salvage Prostheses, Long-Term Evaluation. In our follow-up study, 43 patients with salvage prostheses returned to the hospital for x-ray and evaluation examinations. Every patient in this group was more than one year postoperative, and the average postoperative time was 4.3 years. In this group 37 hip evaluations were above 80 points, and there were overall satisfactory results in 86 per cent. The total average evaluation rating was 83.7 per cent. Table 4 shows specific values for pain, function, range of motion, gait and deformity.

Primary Prosthesis, Long-Term Evaluation. In

TABLE 4

HIP EVALUATIONS*

	Iowa	Cases From Recent Orthopedic Literature
Salvage Procedures		
Number of Cases	43	168**
Average follow-up in years	4.3	3.8
Ratings:		
Pain	30	28.5
Function	30	30.5
Deformity	9	9
Range of Motion	6.7	6.5
Gait	8	7.5
Total	83.7	82
Primary Procedures		
Number of Cases	12	146†
Average follow-up in years	2.3	3.9
Ratings:		
Pain	32.5	30.5
Function	25.8	30.3
Range of Motion	7.5	7.8
Deformity	10	10
Gait	7.9	8
Total	83.7	86.6

* All cases evaluated more than one year postoperative.

** 38 cases Ref. 2; 107 cases Ref. 3; 18 cases Ref. 9; 5 cases Ref. 10.

† 6 cases Ref. 1; 13 cases Ref. 2; 33 cases Ref. 7; 83 cases Ref. 8; 4 cases Ref. 9; 7 cases Ref. 10.

our follow-up study, 12 patients with primary prostheses were evaluated on return visits to the hospital. Five additional patients who had had primary prostheses were brought to the hospital, but because of senility, they were not given hip evaluations. The average postoperative time for the primary prosthesis group was 2.3 years, and for every patient in this group it was more than one year. The total average evaluation rating was 83.7 per cent. Table 4 shows specific values for pain, function, range of motion, gait and deformity.

CONCLUSIONS

(1) The hip prosthesis is a satisfactory method for treating fresh femoral neck fractures in the aged, and for use as a salvage procedure in complications resulting from closed reduction and internal fixation.

(2) In our hands, the complication rate remains high.

(3) The intramedullary stem prosthesis utilizing vitallium or stainless steel has proved mechanically sound and relatively inert.

(4) In patients with fracture of the femoral neck, the use of hip prostheses has not altered the mortality rate after one year.

a. One year after a salvage prosthesis, the mortality rate was 10 per cent.

b. One year after a primary prosthesis the mortality rate was 41 per cent.

(5) After three years, hip ratings of approximately 83 per cent can be expected in patients with primary or salvage prostheses.

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Sickeningly Sweet?

Establishing a cause-and-effect relationship is one of the most difficult tasks of science, especially biologic science. It should therefore be no surprise that only now are artificial sweeteners becoming suspect as a cause of peculiar reactions in some of the people who take them in. For one thing, only recently have they been used in great quantities by the general public. In the past they were used by diabetics and weight-watching people of middle years and beyond. Under the impact of current advertising, their use in soft drinks puts them in the bodies of people from toddling age to wobbling age.

In a letter to JAMA (**194**:571-572, Nov. 1, 1965), Dr. E. Boros describes the manifold personal problems which calcium saccharinate and calcium cyclamate caused for him. He developed pruritis, rash, nocturia, vertigo and a bad taste in the mouth. Despite these distressing manifestations he went to some pains to establish the artificial sweeteners as the cause of his trouble.

The July, 1965, issue of CURRENT NEWS IN DERMATOLOGY describes several cases of saccharin sensitivity including irregularities of cardiac rhythm, urticaria, a shock-like state and photosensitization. The newsletter describes one patient who developed sunlight sensitivity in response to artificial sweeteners, sulfonamides and antidiabetic agents. Several cases of urticarial reactions to these agents have come to our attention, as well as patients developing photosensitivity when taking thiazide diuretics, which are also related to the sulfonamides. Our Russian colleagues have had their doubts about artificial sweeteners, and have banned all but saccharin from the market.

The sneaky thing about sensitivity to artificial sweeteners is that a patient usually will not mention them when asked if he is taking any drugs, especially if soft drinks are the vehicle. One must remember that those gay young things swilling diet drinks with abandon on TV commercials may be all broken out the next day. Let the drinker beware!

—Editorial in NORTH CAROLINA M.J., **27**:150-151, (Mar.) 1966.

Fat Embolism: A Case Report

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Iowa City

Fat embolism has been recognized for over 100 years. In 9,727 fracture and accident patients, the incidence of fat embolism was 8 per cent,[2] and the mortality rate in those who developed fat embolism was 25 per cent.

The clinical picture has been well outlined.[2] Classically the patient is young, has suffered one or more long-bone fractures, and has stabilized from the initial trauma. Between the second and fifth post-trauma day he suddenly becomes confused, febrile, dyspneic, and cyanotic. His pulse rate is rapid, but his blood pressure is usually normal. Auscultation of the chest reveals a few basilar rhonchi and coarse rales. In one-half of the cases, petechiae may be found in the conjunctiva, and on the neck, axilla and anterior chest.[4] The remainder of the examination is unremarkable.

The helpful laboratory values are: (1) A drop ranging from 2 to 4 Gm. of hemoglobin, in the absence of obvious blood loss or intravascular hemolysis.[5] (2) A normal EKG, or one which shows slight right heart strain. (3) Normal SGOT and LDH levels, which rule out cardiopulmonary infarction. (4) Negative blood cultures, which rule out septicemia. (5) Free fat in the urine in one half of the patients within the first three days, as demonstrated by Sudan III fat stain. (6) Serum lipase levels of one unit or greater in one half of the patients within the first three days. (7) Blood gas studies to document hemoglobin desaturation. (8) Chest x-rays which may show areas of diffuse infiltration.

Most people agree that the pulmonary phase of the syndrome is due to vascular sludging, local irritation and hemorrhagic diathesis with consolidation.[6] The end result is a pulmonary capillary-alveolar block, poor gas exchange and hypoxemia. The treatment, therefore, should be aimed at reversing the pulmonary changes before serious or irreversible peripheral hypoxia results.

The following case represents an approach to this problem. R. R. is a 23-year-old Iowan who was involved in an auto accident on November 9, 1965, and sustained a closed comminuted fracture of the left mid-femoral shaft, open fractures of the left tibia and fibula, a closed fracture dislocation of the left ankle, and a compression fracture of the tarsal cuboid.

Emergency treatment on the same day consisted of (1) treatment of shock and blood loss with 6 units of blood, (2) debridement of the open wounds, and (3) stabilization of the thigh and leg in traction. Three days later, he was placed in a Thomas splint and was transferred by ambulance to University Hospitals.

On arrival, he was well oriented. His blood pressure was 150/84 mm. Hg, and his pulse was 150/min. His lungs were clear to auscultation, and no petechiae were noted. Hemoglobin and hematocrit measurements obtained on the morning of transfer were 12.8 Gm. and 32 per cent, respectively. He was placed on a Braun-Bohler frame, and tibial and os calcis pin traction was applied.

On November 13, four days after the accident and 24 hours after admission to University Hospitals, he became restless and confused, began hyperventilating and exhibited cyanosis of his nail beds and lips. His temperature was 104°F. His pulse was 150 per minute. His respirations were 40 per minute, and were shallow and labored. No petechiae were found. The lungs contained coarse rales and rhonchi. Figure 1 is a summary of his course and treatment. The initial hematocrit was 27 per cent. A portable chest film (Figure 3) showed areas of patchy infiltrates bilaterally.

A cutdown was done, and blood was drawn for culture and electrolytes. Penicillin and streptomycin were started. Nasal oxygen was given at five liters per minute. Heparin was given subcutaneously. Fluids were given by vein. Twenty-five grams of albumin were given intravenously. His condition improved slightly on the following day, but the cyanosis and tachypnea were still present. The blood cultures were negative. The electrolytes were normal. The hematocrit had risen to 29 after the administration of three units of blood.

On November 15, intravenous alcohol was added to his regimen. Blood gas studies showed a hemoglobin saturation of 75 per cent, and the nasal oxygen flow was increased to 11 liters per minute. The saturation then rose to 92 per cent, and the patient's lips and nailbeds became pinker.

On November 16 (day 5), blood gas studies showed a 92 per cent saturation while the patient was on oxygen but a significant fall while he was

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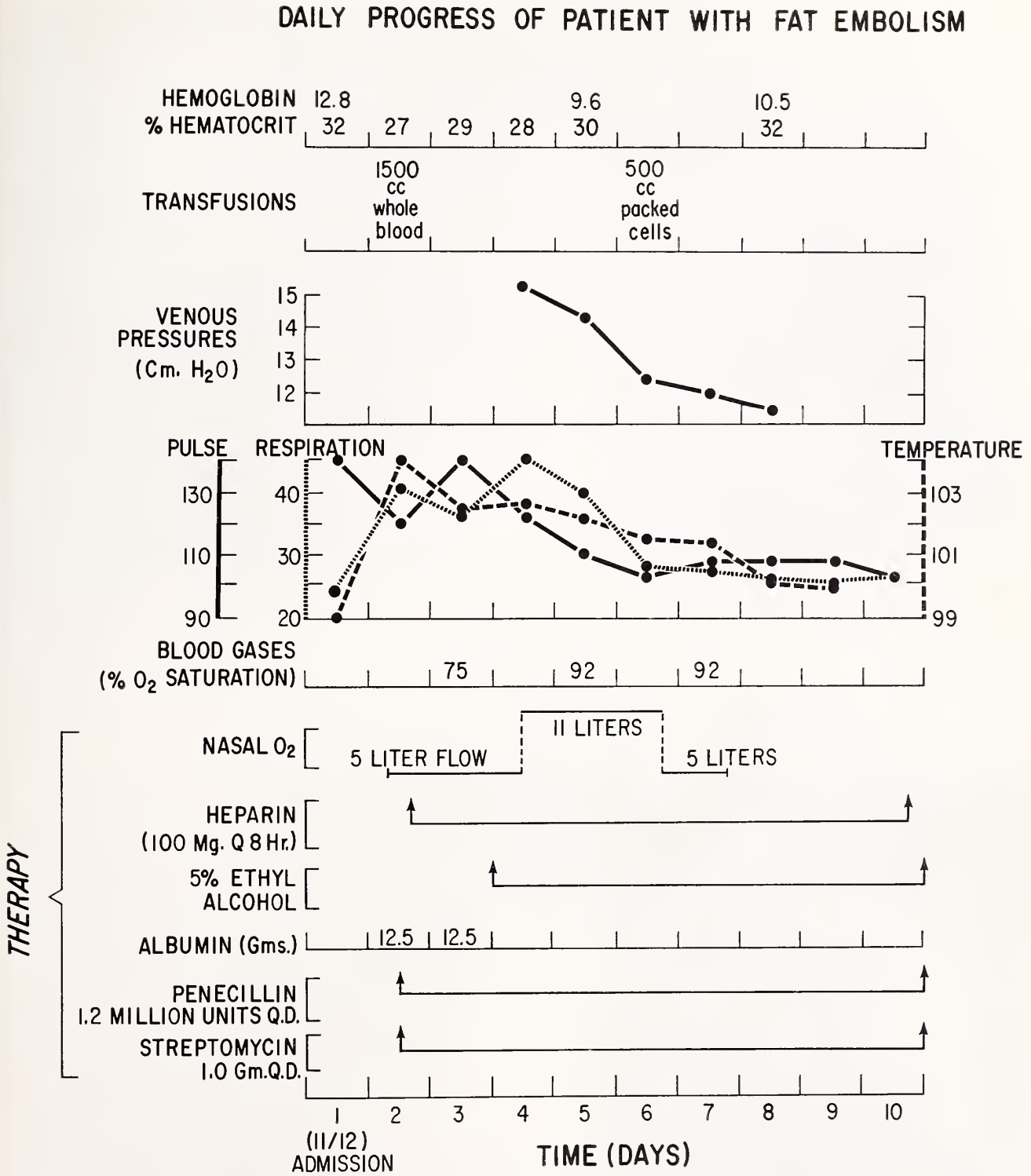

Figure 1. A chart of the patient's course and treatment.

breathing room air. Therefore, nasal oxygen was continued. On November 17, his breathing was much less labored, and blood gas studies showed 85 per cent saturation while the patient was breathing room air, and low normal tidal volume as measured by the spirometer. The nasal oxygen was discontinued the following day. Figures 2-5 show progressive changes in the chest x-rays as the clinical and laboratory pictures improved. Subsequently his open wound was closed, and he is convalescing without further complications.

DISCUSSION

The high oxygen flow rate was necessary to overcome the hypoxemia, but it had no effect on the pulmonary capillary-alveolar pooling. The ele-

Figure 2. Chest x-ray taken on the day of injury. It was interpreted as normal.

Figure 3. Portable chest x-ray taken at onset of symptoms. It was interpreted as showing areas of diffuse patchy infiltration.

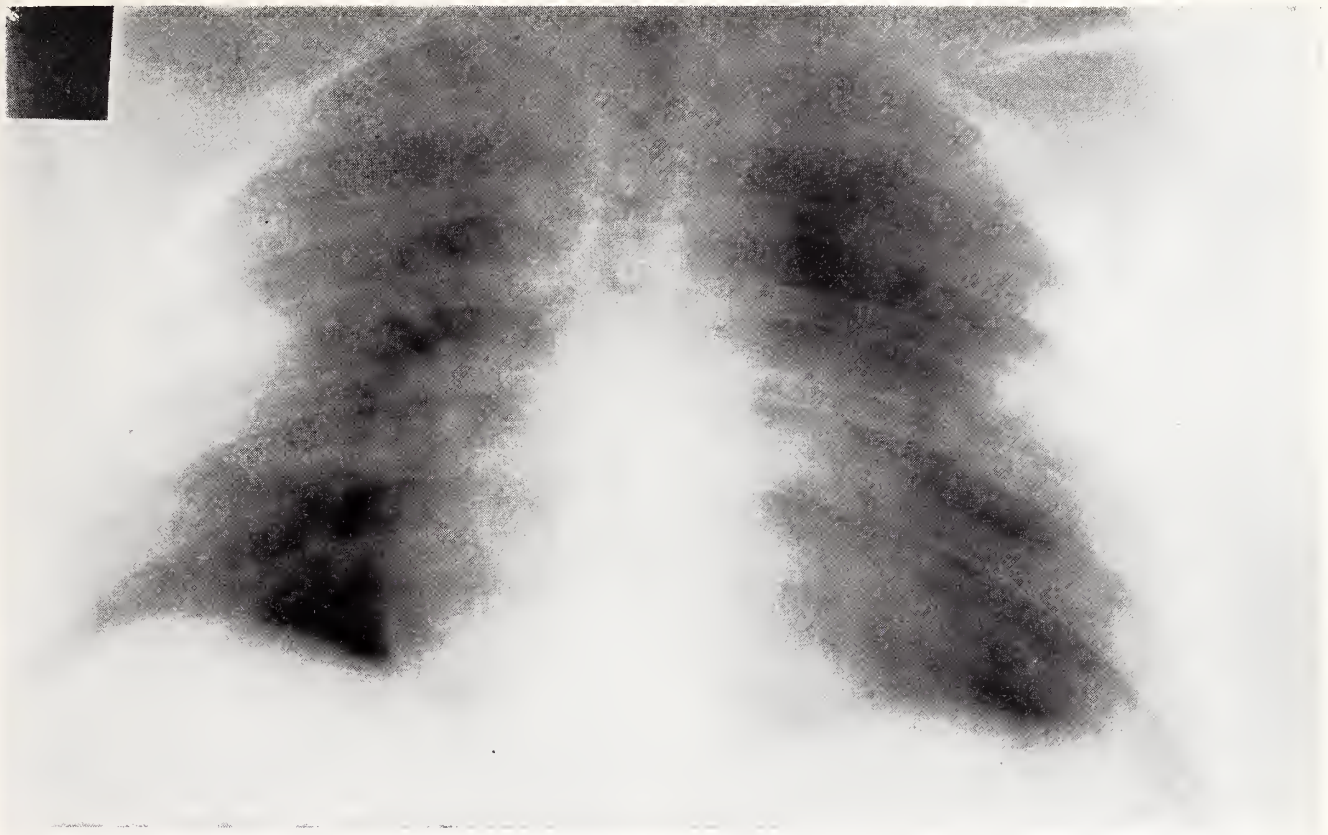

Figure 4. Portable chest x-ray taken three days after the onset of symptoms, showing some resolution of the infiltrates.

Figure 5. Portable chest x-ray taken five days after onset of symptoms, showing a return to normal.

vated venous pressures reflected the pulmonary vascular congestion. Heparin was added (25-100 mg. q8hrs.) because it has a chylolytic effect and also because it is thought to improve microcirculatory flow.[3, 6] Five per cent ethyl alcohol was used (50 ml. of 95 per cent concentration in 1,000 ml. of 5 per cent dextrose in water). The patient was given 3,000 ml. of the mixture per day. Its specific effect is uncertain, but Yale[8] feels that the alcohol causes vasodilation, acts as a sedative, and also inhibits lipase activity.

Human serum albumin was given initially. It is thought to bind some of the circulating fatty acids.[8]

An agent which was not used in this case but can be used in treating vascular sludging is Rheomacrodek's solution or Dextran 40. Its effects are (1) to improve capillary flow, supposedly by placing a negative, repelling charge on each red cell; (2) to increase tissue perfusion by decreasing the viscosity and rouleau formation; and (3) to exert a "siliconizing" effect on injured walls of blood vessels so as hopefully to prevent further effusion. Had the patient failed to respond well to our treatment, that agent would have been added.[1]

SUMMARY

This case history reflects our present thoughts on the diagnosis and treatment of fat embolism. These agents should be used individually or in combination. The most important early therapy is oxygen at high flow rates. Some authors[7] advocate the use of Carbogen. We have no preference. All of the subsequent treatment modalities are aimed at reversing the vascular congestion.

The problem of fat embolism is increasing. This is one approach to its treatment.

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Nowadays there's little meaning
For a person to be gleaning
When a man attaches "doctor" to his name.
He may be a chiropractor
Or a painless tooth extractor,
He's entitled to the title just the same.

Or perhaps he is a preacher
Or a lecturer or teacher
Or an expert who cures chickens of the pip.
He may keep a home for rummies
Or massage fat people's tummies
Or specialize in ailments of the hip.

Everybody is a "doctor"
From the backwoods herb concocter
To the man who takes the bunions from your toes.
From the frowning dietitian
To the snappy electrician
Who shocks you loose from all your body's woes.

So there's very little meaning
For a sufferer to be gleaning
When a man attaches "doctor" to his name.
He may pound you, he may starve you,
He may cut your hair or carve you,
You have got to call him "doctor" all the same.

—Medical Society of the State of New York
NEWS OF NEW YORK, April, 1966.

Animal-Use Bills That Threaten Medical Studies

Federal legislative proposals which, if passed would affect the future supply of research animals have been summarized in an AMA release:

HR 3036 (Pepper, Florida) would create a laboratory-animal control agency within the Department of Justice, and would prohibit federal agencies from using animals in research unless the agencies have "certificates of compliance." It would set tight restrictions on how and by whom animals could be used.

HR 5647 (Cleveland, New Hampshire) would require individuals seeking grants for research to meet many strict requirements. Use of living vertebrate animals would be permitted only when no other method is feasible.

HR 7312 (Tupper, Maine) would authorize the setting of minimum standards for laboratories and animal dealers by a coordinator of animal welfare.

HR 10049 (Rogers, Florida) would create an all-encompassing independent research office of laboratory-animal welfare headed by a coordinator appointed by the President.

HR 5191 (Roybal, California) would authorize the surgeon general to oversee and implement various aspects of animal supply, care and use.

HR 9743 (Resnick, New York) would regulate buying, selling and transporting of cats and dogs by research organizations. Dealers and laboratories would need to obtain licenses from the Secretary of Agriculture. Dealers or research facilities would be culpable for acts of their employees in handling animals.

HR 1087 (Neuberger, Oregon) would require the surgeon general to establish minimum standards for the care, housing and use of animals. The HEW Secretary would be required to set up a reference library on research involving the use of animals.

The Value of Limited Thoracotomy In Diffuse Pulmonary Disease

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Limited thoracotomy not only has a place as a diagnostic tool in many intrathoracic conditions but also is of special value in diffuse pulmonary disease. As for the latter, it has been estimated that a diagnosis can be made on the basis of the history and the physical examination in no more than 10 per cent of the cases, and in only 35 per cent of the cases can it be made even after extensive study. Gaensler[1] has pointed out that diagnosis is so difficult because many of these diseases that produce diffuse pulmonary changes are limited to the lung, cause no characteristic pulmonary secretions, and result in no detectable extra-pulmonary manifestations. Often, for various reasons, diagnosis is an urgent matter. Frequently medical-legal problems arise, as well as problems in choosing treatment and in defining prognosis.

In addition, lung biopsy has been of prime importance in evaluating and bringing to light many pulmonary-disease processes. Examples of a few of these are maple-bark disease, silo-filler's disease, desquamative interstitial histocytic pneumonitis and eosinophilic granuloma. The usual patient for whom a thoracotomy is proposed is one who manifests severe progressive illness, frequently with respiratory insufficiency, weight loss, and fevers of unknown origin which do not respond to antibiotics, steroids or other therapy. Cancer is often suspected, or the patient may have hemoptysis, cor pulmonale, a polycythemia or other unexplained findings.

In a patient with diffuse pulmonary disease in whom all routine and special diagnostic studies have been made unsuccessfully, we should like to propose that a thoracotomy and lung biopsy be performed as the next step. These can be carried out with a minimum of risk, even if the patient is of advanced age and has severe medical problems.

Gaensler[1] has recently reported an extensive series—105 lung biopsies. In his series he noted an average delay of 1.53 years between the time of onset of symptoms and biopsy. In 33 per cent of these cases he found that the diagnosis could only have been made by a lung biopsy. It was helpful in 11 per cent of his patients with diseases that ordinarily did not require lung biopsy, and in 51 per cent of the cases biopsy was required for confirmation of the disease process and the diagnosis. In only 5 per cent of the cases did biopsy provide no diagnostic help. These results were due in part to the excellent way in which he handled the tissue obtained, but they also serve to indicate the value of lung biopsy.

In this report, we should like to re-emphasize the importance of limited thoracotomy as a diagnostic tool in such cases, and by describing seven recent cases, to illustrate the value of biopsy as soon as possible after all other diagnostic methods have been unsuccessfully employed. In 1959, Klassen[2] pointed out the advantages of a small anterior thoracotomy for the purpose of lung biopsy. Effler[3] and Theodos[4] also indicated its advantages. Gaensler[1] employed it in one-third of his cases. The method is especially applicable to difficult medical cases. One makes a small anterior incision, approximately 10 cm. in length, and may extend it a little farther if the hilum or deeper structures are to be evaluated.

CASE HISTORIES

Case No. 1 was a 70-year-old farmer. He had been followed at the Veterans Hospital since 1958 for hypertension and angina pectoris. On 10-11-'62, he was admitted with shaking chills and fever, and gave a history of a recent 15-pound weight loss. Physical examination revealed dullness at the right base, with very poorly heard breath sounds in the same area and diffuse crackling rales throughout the remaining lung fields. A chest film (Figure 1) revealed a diffuse extensive pulmonary infiltrate in both lungs.

After five weeks of intensive treatment and workup, which included bronchoscopy, cytologic studies, scalene-node biopsy and skin tests, a lung biopsy was performed on 11-16-'62. The sections (Figure 2) revealed histoplasmosis with many visible organisms (Grocott's stain). He was treated with a course of amphothericin-B that totaled

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Figure 1. This radiograph shows a diffuse bilateral pulmonary infiltrate.

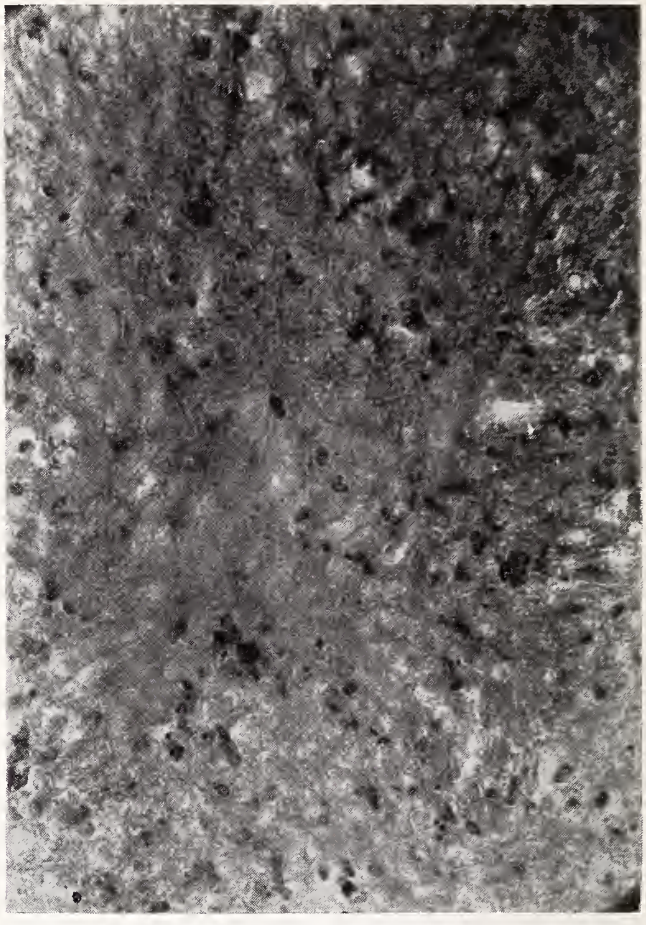

Figure 2. This section reveals histoplasma capsulatum organisms which were prevalent throughout the biopsy specimen (Grocott's stain X 680).

2,000 milligrams. He experienced some of the gastrointestinal upset, fever and malaise which are characteristic of treatment with this drug. He was last seen in April, 1964, when he was 72 years of age and when two years had elapsed since the lung biopsy. He had gained 50 pounds, the symptoms of angina and dyspnea had been relieved, and he was off nitroglycerine and doing quite well. His x-rays showed the same infiltration, but his lungs were negative on examination. The procedure established the diagnosis and led to a treatment to which the patient responded favorably.

Case No. 2, a 45-year-old housewife, was admitted to the University Hospitals for evaluation of back pain and an abnormal chest film in August, 1964. She had been hospitalized in September, 1964, at a local hospital, where a benign ovarian cyst had been found on abdominal exploration, and removed. The back pain had continued, however, and the patient had begun to lose weight.

Physical examination revealed no significant adenopathy. There was a localized area of tenderness in the lumbodorsal spine and on the lateral aspect of the right humerus and left side of the sacrum. Bronchoscopy, scalene-node biopsy, gastrointestinal and genitourinary radiographic surveys, bone and spine surveys, mammograms of breasts, bone marrow examination, thyroid I_{131}-uptake tests and thyroid scan were performed, but failed to establish a diagnosis. On 10-12-'64, a lung biopsy revealed Hodgkin's disease of the granulomatous type. The patient received cobalt treatment, and soon gained considerable relief from her complaints.

The importance of establishing the diagnosis as a means of determining the treatment is self-evident in this case.

Case No. 3 was a 68-year-old mailman who had been well all of his life. In April, 1964, he developed a chronic cough. His physician took a chest x-ray and made a diagnosis of pneumonitis. Antibiotics produced some improvement in the cough and in the x-ray appearance, but the symptoms soon worsened, and the patient was referred to the Veterans Hospital two months after the onset of his illness.

Examination on admission revealed a chronically ill man, who had lost approximately 10 lbs. and was febrile. A chest film (Figure 3) revealed widespread pulmonic infiltrates bilaterally, and prominent mediastinal nodes especially on the right. The films were thought to be quite suggestive of sarcoid. All skin tests, including the Kveim test, were negative. Bronchoscopy and cytology, scalene-node

biopsy and bone-marrow examination were all unrevealing. A sputum culture grew out paracolon intermedius. The patient became afebrile on Chloromycetin. An electrocardiogram revealed complete left bundle branch block. There was a first-degree AV block with multiple premature ventricular contractions. Lung biopsy was considered unwise, and the patient was discharged in June, 1964.

Two months later he developed hemoptysis and abdominal pain, and was re-admitted. The chest film had not changed, and an upper-gastrointestinal series showed a duodenal ulcer. While in the hospital he developed a thrombophlebitis which delayed biopsy.

On September 17, 1964, a lung biopsy was finally accomplished, revealing severe, chronic, interstitial fibrosing pneumonitis, with sheets of carcinoma within the fibrous tissue. The lymphatics were filled with well-differentiated adenocarcinoma (Figure 4). In addition, severe endarteritis obliterans was present. A general survey was made of the genitourinary and gastrointestinal tracts, and a search was made for possible primary sites, but none was found. The patient was discharged one week after the biopsy.

This case illustrates the value of lung biopsy as a diagnostic as well as a prognostic aid.

Case No. 4 was a 73-year-old farmer who had been treated by his local physician for about a year because of difficulty in breathing. He also had severe rheumatoid arthritis and Parkinson's disease. He was admitted to the Veterans Administration Hospital in October, 1962.

A chest film revealed a rather diffuse reticular infiltrate in both lung fields, more pronounced in the lower portions. Skin tests for histoplasmosis, blastomycosis and coccidioidomycosis, and the Kveim test were all negative. Pulmonary-function tests revealed reduced vital capacity, with normal residual volumes and uneven distribution of inspired air. Maximal breathing capacity and expiratory flow rates were normal. There was a moderate reduction in diffusion capacity. Bronchoscopic, cytologic and bacteriologic studies and bilateral scalene-node biopsies were negative. The patient's occupational history revealed that at one time he had worked as a painter, and his family suspected that this might have been a cause of his lung disease.

On 11-27-'62, under general endotracheal anesthesia, a limited anterior thoracotomy incision was made and the lung biopsy performed. The pathologic diagnosis was chronic interstitial pneumonitis and fibrosis, with dilatation of the small

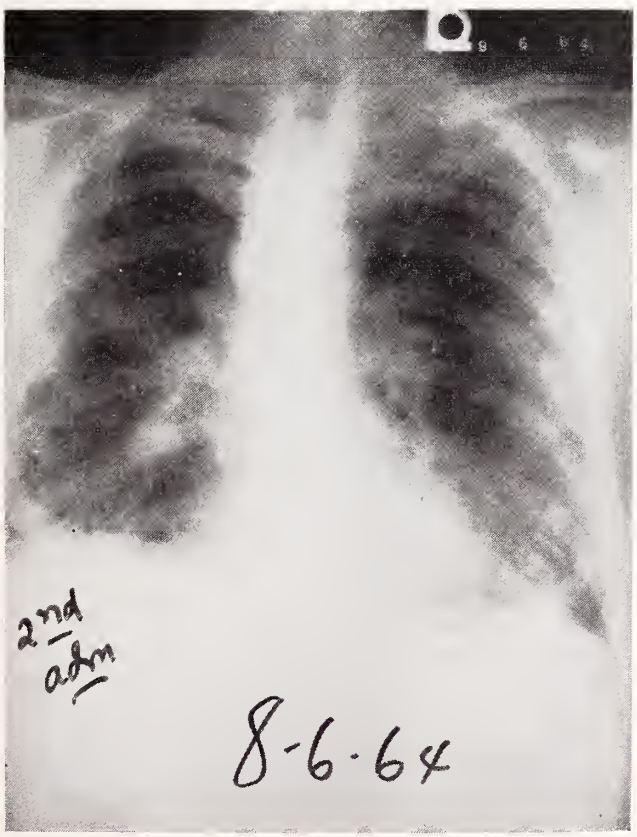

Figure 3. Widespread bilateral infiltration and prominent mediastinal lymph nodes on the right are evident.

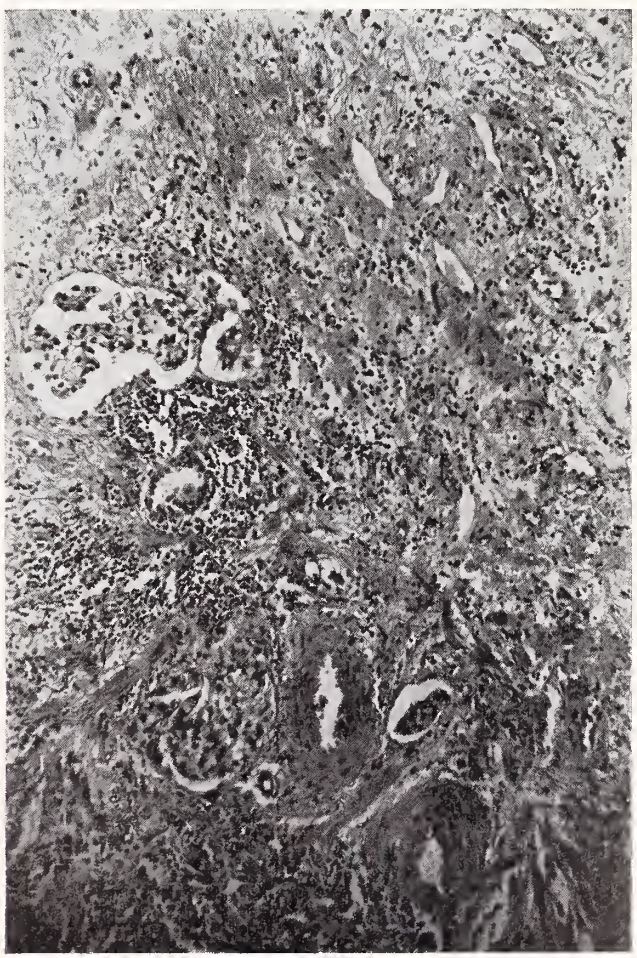

Figure 4. This section reveals a severe, chronic, interstitial, fibrosing pneumonitis. Lymphatic channels containing well differentiated adenocarcinoma are evident (H. & E. X 144).

bronchi and chronic bronchitis. The patient was instructed in breathing exercises, and has been watched very closely by his family physician so as to avoid pulmonary infection.

He did well until April, 1964, when he was re-admitted because of increasing shortness of breath. It was noted at that time that he had a microcytic anemia for which no specific cause could be found despite an extensive hospital workup. It was felt that the anemia was on the basis of chronic rheumatoid arthritis and chronic lung disease. During the past six months, he has done quite well. His symptoms have improved, and a chest film at the time of his followup revealed no change from his previous films.

This patient again illustrates the feasibility and value of this approach in elderly sick patients. It also illustrates an example of how lung biopsy has correlated clinical and radiographic data with specific disease processes, in this instance rheumatoid arthritis. Such cases have established a variety of pulmonary manifestations of rheumatoid arthritis of which diffuse interstitial fibrous is the most common.

Case No. 5 was a 53-year-old farmer who was first admitted to the Veterans Administration Hospital on 10-25-'62 with severe dyspnea, paroxysmal nocturnal dyspnea, pedal edema and chest pain. He was hypertensive and diabetic. His symptoms had begun one year prior to admission, when he first became ill and was treated for congestive heart failure by his local physician. A chest film at that time revealed cardiomegaly and bilateral reticular infiltrations in both lungs, more pronounced on the right side.

On his admission, chest films showed essentially no change. On physical examination, he was dyspneic at rest, and moist rales were heard throughout both his lung fields. The liver was palpated 9 cm. below the costal margin. There was a 3+ pitting pedal edema. The eye grounds revealed Grade III hypertensive changes. PPD and coccidioidin tests were negative, but undiluted histoplasmin was 2+ reactive, and the blastomycosis was also reactive 2+ undiluted. Bronchoscopy and cytologic studies were negative. A bacteriologic culture of the bronchial aspirate grew out beta hemolytic Streptococcus.

The patient was treated vigorously for his heart failure and pulmonary infection, and his condition improved. On 11-27-'62, under general endotracheal anesthesia, a lung biopsy was performed through a limited thoracotomy. The histologic report was chronic interstitial pneumonitis. All cultures were negative.

Following surgery he had no trouble. He was discharged, and under the care of his physician, he did well for two years, until July, 1964, when he was admitted in a moribund condition and died soon thereafter. Autopsy revealed acute, massive myocardial infarction and occlusion of the left anterior descending branch of the left coronary. The lungs revealed a chronic interstitial pneumonitis, with severe fibrosis and evidence of recent congestion.

In the care of this patient it was helpful to know that no occult specific pulmonary disease process was being overlooked.

Case No. 6 was a 44-year-old spray painter who was first seen at the Veterans Hospital in July, 1962. He said that he had had respiratory difficulties for one year prior to admission. He was admitted because of joint swelling and symptoms of shortness of breath.

Chest films revealed extensive bilateral lower-lobe infiltrates. Skin tests, bronchoscopic, cytologic and bacteriologic studies, scalene-node biopsy, liver biopsy, bone-marrow examinations and other studies failed to reveal the nature of his underlying illness. He was discharged symptomatically improved in July, but was re-admitted three times between July and December, 1962. In December, 1962, a lung biopsy was undertaken as a means of establishing the diagnosis because the patient's family felt that the problem was related to his occupation. General anesthesia and a limited thoracotomy were employed. The pathologist's report was chronic bronchitis and interstitial pneumonitis with mild emphysema.

Steroids were avoided in the patient's treatment. He was given aspirin only to control the joint symptoms. He gradually improved. When he was last seen in September, 1964, he had only moderate dyspnea on exertion, his joint pains were minimal, he had gained weight, his lung fields were clear, his EKG was normal, and his liver and spleen were no longer palpable. His chest film, however, was unchanged.

Lung biopsy, somewhat delayed, was most important in the adjudication of this man's claim under Workmen's Compensation Laws.

Case No. 7, a 70-year-old retired foundry worker, was admitted to the Veterans Hospital on 10-8-'64 because of shortness of breath, cough and a weight loss of 30 lbs. Six days prior to admission, he had been admitted to another hospital with a left-sided pneumothorax. He was a heavy smoker.

Physical examination revealed a well nourished male in moderate respiratory distress. The chest was barrel-shaped, breath sounds were distant and diffuse, and sticky rales were heard throughout the lung fields. A chest film showed a flocculonodular infiltrate throughout both lung fields, with a coalescence or neoplasm in the right upper lobe near the hilum. A large emphysematous bleb was present in the left apex. Bronchoscopy, cytology and bilateral scalene-node biopsies were all negative. Pulmonary-function tests were compatible with severe emphysema. IVP's and lower and upper gastrointestinal series were normal. Because of the possibility of neoplasm and because of impending legal action, a lung biopsy was performed

on 11-19-'64. The mass was not carcinoma. All cultures were negative, and the final diagnosis was anthracosilicosis with advanced emphysema and chronic pneumonitis.

Postoperatively, the patient's hospital course was smooth, although his symptoms remained essentially the same. Again information towards solving a medical-legal problem was brought to light despite advanced age and illness.

COMMENTS

In clinical practice, the difficulty in establishing the diagnosis in diffuse pulmonary disease is well recognized. The value of lung biopsy is also accepted. With proper handling of the biopsy specimen, the yield is high. However, this method is usually employed only after careful study and observation have failed to throw light on the problem at hand. In many instances, unfortunately, lung biopsy is not undertaken because the patient is ill or aged. In other instances the procedure is delayed until questions concerning prognosis or Workmen's Compensation demand an answer. According to Gaensler, in 82 cases the average delay between the abnormal chest film and biopsy was about 1½ years, and in 11 cases the delay was over four years.

A standard thoracotomy is the best exploratory approach when the hilum of the lung, the mediastinum and the lungs themselves are to be observed. In diffuse pulmonary disease, a limited thoracotomy will give a yield approaching that of the more extensive operation. At the same time, we believe the morbidity and mortality will be reduced to a minimum. The technic which we have found to be most satisfactory entails general endotracheal anesthesia, the supine position and a small anterior thoracotomy incision.

CONCLUSIONS

1. Lung biopsy is frequently necessary in establishing or confirming the diagnosis in diffuse pulmonary disease. The procedure, however, is often delayed because the risk is thought to be greater in elderly or very ill patients.
2. Limited thoracotomy will give a high yield in diagnosis with a minimum of delay and risk.
3. Seven case reports have been presented to illustrate the value of the procedure.

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New Responsibilities for Dr. Hill

The University of Iowa announced in April that Dr. Lee Forrest Hill, of Des Moines, would assume new duties in medical education in Des Moines and at the College of Medicine, in Iowa City, shortly after May 1. Dr. Hill holds the rank of clinical professor at the University of Iowa College of Medicine and is director of pediatric education at Raymond Blank Memorial Hospital for Children. He will assume the additional duties of director of pediatric education at Broadlawns Polk County Hospital, effective June 1. In addition, he will participate in teaching activities in the Department of Pediatrics at the University of Iowa, and will serve as a coordinator for joint programs between the College of Medicine and the Des Moines hospitals.

In announcing the expansion of Dr. Hill's role, Dean Robert C. Hardin expressed pleasure that integrated teaching programs of excellence could be developed between the College of Medicine and the affiliated hospitals in the Des Moines area. He stressed that future programs in the education of medical students and graduate physicians will utilize regional hospitals to an increasing degree.

Dr. Hill, a native of New Hampshire and a graduate of the Harvard Medical School, entered the practice of pediatrics in Des Moines shortly after World War I. He is a past-president of the American Academy of Pediatrics, he is currently active in planning and reviewing pediatric residency training programs for physicians throughout the country, and he serves as an examiner for the American Board of Pediatrics.

In announcing his retirement from private practice, Dr. Hill indicated that his office at the Medical Arts Building, 3200 University Avenue, Des Moines, will be incorporated into the office of Drs. Ralph Dyson and Robert Anderson. Records of Dr. Hill's former patients will be available through that office to the physicians who succeed him in the care of those patients.

Addendum to Article on Drug-Testing

In Table 4 of "Testing Antibiotics and Chemotherapeutic Agents," by Smith, Rabinovich and Rhoden, which appeared in the April issue of the JOURNAL, the examples included drugs still under test, and the effects are not firmly established. Cephaloridine, where it was listed as a drug capable of causing renal damage, should have been followed by a question mark, since that effect is either rare or idiosyncratic. Similarly, Dicloxacillin should have been followed by a question mark, since renal damage from its use has so far been found only in experimental animals.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 451

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
SALLY R. OSBORNE, Secretary

SUMMARY OF CLINICAL FINDINGS

THE PATIENT was a 60-year-old man who had been in apparent good health until one hour before his admission to the University Hospitals. Then, while dismounting from his bicycle, he experienced a sudden onset of pain and numbness in his right leg. Associated with it was a pressure sensation in the epigastrium and retrosternal area which did not radiate into the shoulders, arms, or neck. He had no shortness of breath. His past history revealed no severe illnesses or history of arterial, cardiac, or neurologic disease.

Physical examination revealed a well-developed 60-year-old man with a blood pressure of 150/80 mm. Hg, and a pulse of 80 per minute with a regular rhythm. Examination revealed that the lungs were clear to auscultation and percussion. The heart had a normal sinus rhythm and was not enlarged. There was a Grade 2 early diastolic murmur at the apex. The right femoral pulse was not palpable, and distally no pulses were palpable on the right side. The right lower extremity was cooler to palpation than the left. There was blanching of the right lower extremity. A systolic bruit was present over the right iliac artery. The pulses were normal in the left lower extremity. The abdominal aortic pulsations were described as prominent, but no aneurysmal dilatation was felt.

The hemoglobin on admission was 14 Gm. per cent, and the white blood count was 14,200/cu. mm. A blood urea nitrogen was 45 mg. per cent, and a creatinine was 4.7 mg. per cent. The urinalysis was within normal limits. An electrocardiogram obtained at the time of admission was normal. A chest film on admission showed mild left ventricular hypertrophy. An abdominal film revealed no calcification suggestive of an aortic aneurysm, and the film was interpreted as normal.

Four hours following admission, the patient was taken to the operating room with a preoperative diagnosis of thrombosis or embolus of the right common iliac artery. At exploration through an abdominal incision, the patient was seen to bleed excessively from the skin margins and from the subcutaneous vessels. The right common iliac artery was exposed. An arteriotomy created in the external iliac artery revealed good backflow from the extremity. No flow was observed proximally. A second arteriotomy was made in the right common iliac artery immediately distal to the aortic bifurcation, and a flap-like tear in the intima was found which occluded the vessel. This flap was resected, and a brisk flow of blood was then seen to come from the proximal as well as the distal lumen. The arteriotomy incisions were closed, and exploration of the remainder of the abdominal cavity revealed no abnormalities. The patient received 2,000 ml. of blood during the operation.

In the postoperative period the patient bled profusely from his abdominal wound, and the dressings were changed frequently. He received a total of 11 units of blood during the postoperative period, including two units of fresh blood collected in plastic containers. Studies obtained in the postoperative period revealed the prothrombin time to be 18.8 seconds with a control of 13.6 seconds. The bleeding time was three minutes, and the coagulation time was 12 minutes. There was no evidence of fibrinolysis at three hours. Additional coagulation studies revealed prolonged first and second stage prothrombin times. The clot retraction was complete at five hours. Bone-marrow aspiration was carried out, and was essentially normal. A normal concentration of megakaryocytes and platelets was observed.

In spite of the repeated blood transfusions, in the postoperative period the patient's pulse continued to rise, and his condition deteriorated. Eighteen hours following the original operation, it was decided to reexplore him. He died while being transported to the operating room.

CLINICAL DISCUSSION

Dr. M. S. Lawrence, Surgery: The student representative in our discussion of the protocol today will be Mr. Crumley.

Mr. R. Crumley, junior ward clerk: To get right down to business, the students' diagnosis today is

a dissecting aneurysm of the aorta. The reasons for this diagnosis are the following: (1) A pressure sensation in the epigastrium and retrosternal area. Though not a true characteristic ripping pain, nevertheless the pain which has been mentioned would fit with the diagnosis. (2) We have no concept as to the onset of the early diastolic murmur. If there were acute onset coupled with a chest pain assumed to be due to dissecting aneurysm, it would be virtually pathognomonic. (3) The femoral pulse is absent in 7 per cent of all dissecting aneurysms presenting in this way, and again the absence is compatible. Other phenomena compatible with the diagnosis are (4) left ventricular hypertrophy, (5) the intimal tear peripherally, which is found in about 4½ per cent of all dissecting aneurysms, and (6) the postoperative bleeding, which could have been due to rupture of that aneurysm.

Other parts of the history compatible with this diagnosis would be the age and sex of the patient, leukocytosis, the elevated BUN and creatinine, the history of good health, and the patient's activity at the onset.

There were also a few things against this diagnosis: The pain, as I said, was not the characteristic ripping pain. Particularly important is the absence of hypertension in the patient's history. Also the chest film did not show the widened supracardiac shadow which we expect to find with a dissecting aneurysm. Of particular significance was the surgeons' failure to find additional abdominal pathology at laparotomy. This makes us think of a similar lesion in the iliac, and it might be hemorrhage under an atherosclerotic plaque, with flap formation and subsequent occlusion of the iliac.

If that is what caused the patient's initial symptoms, the blood picture is probably significant. We had a great deal of trouble interpreting the blood picture and bleeding profile, and we should have welcomed a platelet count, which was not in the protocol. The clot retraction was increased to five hours, and in trying to rationalize this finding, or just reason it out, we come up with uremic thrombasthenia. It is hard to explain the patient's BUN of 45 mg. per cent on the basis of his aneurysm alone, for if its dissection past the renal arteries took place at the onset of leg pain, it occurred only one hour prior to admission. Other lesions which might give us the clot-retraction time would be a primary thrombasthenia or a primary thrombocytopenia, but the history suggests neither of them.

Since this patient received a total of 15 units of blood, including four in surgery, a transfusion reaction and a thrombocytopenia must be considered. If the hemorrhage were not due to the dissecting aneurysm and if the atherosclerotic plaque theory were responsible for the occlusion, the postoperative bleeding could have been due to leakage from the two arteriotomies, or bleeding from a stress ulcer, although we have nothing in the protocol to suggest GI bleeding.

Consistent with our diagnosis of dissecting aneurysm, we should expect the pathologic findings to include hemorrhage into the retroperitoneal cavity, intraperitoneal space or mediastinum; an intramural hematoma in the aorta; probably a proximal intimal tear in the ascending aorta; diffuse atherosclerosis, probably of the large vessels; and possibly a duodenal ulcer, if that was what caused the patient's terminal blood loss.

Dr. Lawrence: Thank you, Mr. Crumley. The platelet count was 59,000/cu. mm. Dr. Connor will now discuss the protocol for the staff.

Dr. W. E. Connor, Internal Medicine: Mr. Crumley has given an excellent summary of this patient's clinical course. The brief clinical history provides little information about his past life, and its most outstanding feature is the fact that the patient rode a bicycle. The symptoms of his fatal illness began as he dismounted from his bicycle.

What physical capacities are necessary to pedal a bicycle? One must be able to expend calories up to a rate of 11 per minute. That is one of the highest energy expenditures required from people engaged in physical exertion. Walking takes about 4 to 5 calories per minute. If we can rely upon the bicycle story—one which I am sure Dr. Paul White would be delighted to learn about—the patient was in a very good state of health. He had excellent exercise tolerance. He could not have had significant pulmonary disease, angina pectoris or peripheral arterial insufficiency. We are obliged to assume that he was an individual in a perfect state of health who then developed a number of alarming symptoms within a short period of time and died 24 hours later.

The first symptoms were pain and numbness in the right leg. These suggest either a neurologic catastrophe or an acute vascular obstruction. Then he had pain in other areas of his body, seemingly unassociated with the leg pain. He developed a pressure sensation in the epigastrium and in the retrosternal area. Three areas of the body were thus involved: a lower extremity, the abdomen, and the chest. He did not have shortness of breath, and the pain did not radiate. We are given no description of the pain.

On physical examination, the patient revealed little that was remarkable, but there were several noticeable exceptions. He was not hypertensive. He had a Grade II early diastolic murmur at the apex of his heart. Could this have been the murmur of mitral stenosis? If so, since the patient had a sinus rhythm, one would have expected two components: a presystolic rumble and an early diastolic component. It does not seem to have been the diastolic murmur of mitral stenosis, nor does it seem to have been a murmur with similar characteristics—the Austin-Flint murmur which occurs at times with aortic insufficiency. My guess is that his was the diastolic murmur of aortic insufficiency heard at the apex of the heart.

Proceeding to the findings in the right lower extremity, we find verification of the suggestion that vascular obstruction had occurred. The patient had no right femoral pulse, and there were findings of blanching and coldness in the right lower extremity. A systolic bruit was heard over the right iliac artery, indicating partial obstruction. The aorta was palpable and prominent, but was not dilated.

The leukocytosis of 14,000 was nonspecific and suggested only an acute illness. The elevated blood urea nitrogen and creatinine are perplexing. Did this man have chronic renal insufficiency? Or had the acute process been going on longer than a few hours, in a less symptomatic form, so that he had had time to develop azotemia? From the analysis given in the protocol, we do not know which of these circumstances was present. If one wishes to combine the features of his illness into a single disease, I assume that the azotemia was related to the other findings already mentioned in the cardiovascular system. The electrocardiogram was normal; we know nothing about what it might have become—only that it was normal at the time it was taken. The chest x-ray showed mild left ventricular hypertrophy. This finding might fit with a previous asymptomatic and mild valvular heart disease. The fact that the patient's blood pressure was not elevated at the time of admission does not rule out a chronic hypertensive state. The abdominal films showed no calcification of the aorta.

What disease patterns might produce the five signs and symptoms which this patient exhibited —pain in the right leg, epigastrium, and sternum; an apical diastolic murmur; absent arterial pulses in the right lower extremity with the signs of arterial obstruction; left ventricular hypertrophy; and azotemia? Will myocardial infarction produce this complex of symptoms and signs? The electrocardiogram was normal. The pain pattern was not typical for myocardial infarction. If the patient had myocardial infarction, he clearly must have had mural thrombosis of the heart, and later an arterial embolus to the right leg. Why was there a kidney involvement? Perhaps it was from extrarenal causes such as shock.

Although we cannot rule out myocardial infarction completely, it fits only some of the features of this man's story. Did he have an embolus from the heart from another cause—from a myocardial tumor (i.e., myxoma of the left atrium)? Perhaps he had had atrial fibrillation with arterial embolization. No evidence for either of these possibilities is at hand. Did he have an embolus from a leg vein to the lungs causing the chest pain of a pulmonary embolus and later paradoxical embolism to the right femoral artery via a patent foramen ovale? These circumstances would not produce the early diastolic murmur. Did this patient have a diffuse arteritis? Persons with either giant-cell arteritis or polyarteritis nodosa are usually chronically ill by the time they reach a physician. A local thrombosis of the right femoral artery would not explain the chest or abdominal signs and symptoms. An intra-abdominal catastrophe such as acute pancreatitis with the resultant tendency to thrombosis or perforated peptic ulcer seems an unlikely possibility.

Finally, I am left with the strong suspicion that this man did have a dissecting hematoma or dissecting aneurysm of the aorta. Such a process, involving the aorta from its origin into the right iliac artery, might explain all of the signs and symptoms—the diffuse nature of the pain, the diastolic murmur, the renal insufficiency with involvement of the orifices of the renal arteries, and occlusion of the right femoral and right iliac arteries. This diagnosis is compatible with the impression of left ventricular hypertrophy from preexisting hypertensive disease.

The patient had an exploratory operation, and we are told that at the time of surgery there was excessive bleeding from the skin margins and from the subcutaneous vessels. The arterial exposure revealed a flap-like tear in the intima, occluding the right iliac artery. This finding is compatible with the impression of a dissecting hematoma of the aorta that has extended into the iliac artery.

Postoperatively, having received two liters of blood during the operation, the patient bled to such an extent that the dressings had to be changed frequently. Ultimately, he received an amount of blood exceeding his own blood volume —perhaps 7½ liters. Various coagulation studies, including a platelet count of 59,000/cu. mm., indicated that the patient had marginal blood coagulation. Did he have a congenital hemorrhagic diathesis which his surgical procedure brought into overt symptomatology? I think the evidence is against that. Again, I refer to his riding a bicycle. A man with severe hemophilioid disorder would not be riding a bicycle at age 60. He would already have hemarthrosis, and probably would have been warned *not* to ride a bicycle.

Several hemorrhagic problems can result from multiple blood transfusions (Table 1). It may be difficult to recognize the incompatibility of a blood

TABLE 1

BLEEDING AFTER INCOMPATIBLE BLOOD TRANSFUSIONS

Hemolyzed red blood cells
↓
Intravascular clotting
↓
Depression of clotting factors
- Hypofibrinogenemia
- Thrombocytopenia
- Factor V
- Prothrombin

transfusion given to a patient under anesthesia. Hemolyzed red blood cells from incompatible blood may cause intravascular clotting, perhaps as a result of the release of thromboplastic substances from the red cells or the release of adenosine diphosphate. With intravascular clotting, consumption of various clotting factors and platelets occurs—thrombocytopenia and a reduction in the levels of fibrinogen, prothrombin, factor V and other factors. After depletion of the various clotting factors, the patient develops a bleeding tendency. The other problem in which massive transfusions sometimes seem to be the cause of bleeding at surgery and postoperatively is that the blood volume has been replaced with bank blood which was not as good as the original blood. It has been said that after five liters of blood have been administered, transfusion bleeding occurs because bank blood has few platelets, so that there may be thrombocytopenia from dilution. Clot retraction may then be impaired and the bleeding time increased as a result of a deficiency of platelets. There also may be a low prothrombin concentration because, as Drs. Warner and DeGowin showed many years ago, the prothrombin level decreases in bank blood. In addition, factors V and VIII, both labile factors, diminish in bank blood.

Finally, in a patient with shock-like state or with hepatic impairment, bleeding can occur as a result of the anticoagulant citrate contained in the bank blood. Ordinarily, infused citrate is rapidly metabolized by the liver and does not exert an anticoagulant effect by tying up the circulating calcium ions necessary for blood coagulation. In the patient under discussion, severe vasoconstriction in the viscera may have reduced the hepatic circulation. Thus, I cannot exclude the possibility that citrate was a factor in this patient's bleeding. My feeling, however, is that bleeding was not the primary problem, and rather that it simply entered into the terminal event. The low degree of azotemia probably did not interfere with platelet function. Ultimately, as this patient bled, he reached an apparent state of irreversible shock, and before he could be reoperated on, he expired. I suspect the aorta began to leak, or that it ruptured into some body cavity.

The characteristic features of dissecting aneurysms of the aorta have been well summarized from some 500 cases by Hirst, Johns, and Kline.[1] Pain is a usual feature of dissecting aneurysm, and a march of pain from one part of the body to another is most characteristic. A number of patients however—up to 30 per cent—may have no pain with dissecting aneurysm and may die suddenly. Since the dissecting aneurysm may involve any of the blood vessels arising from the aorta, neurologic signs and symptoms can be seen in about one-third of the patients. Hemiplegia, monoplegia, various paralyses and even states of unconsciousness may occur from involvement of the carotid, the vertebral, and the anterior spinal arteries. Myocardial infarction from dissecting aneurysm is a possibility, too, because the coronary ostia may be compressed and occluded.

The appearance of murmurs is interesting. Nowhere was I able to find a description of the solitary early diastolic murmur heard at the apex in the patient under discussion. One finds diastolic murmurs at the base, systolic murmurs at the base, and systolic murmurs at the apex and base, but whenever a diastolic murmur has occurred at the apex, there has always been some other murmur at the base. A solitary diastolic murmur at the apex stands out as a rather unusual feature of this individual's dissecting aneurysm, if that indeed was what he had.

Some reports indicate that these patients have an elevated blood pressure, despite a state of relative shock. Other reports suggest that the blood pressure falls from previously higher levels, so that there may be outright syncope. In chronic dissecting aneurysms, congestive heart failure may develop, perhaps as a result of aortic insufficiency occasioned by weakness of the aortic valve ring that has been involved by the dissection. Rupture of the aorta into the pericardium or pleural space may be a final event. In fact it is of interest that one physician—Dr. James Paullin, a student of this particular disease—diagnosed the condition in himself as it occurred.[2] He described a tearing sensation inside of his chest, and then he went on to say that his aneurysm was going to rupture into the left pleural space. His prediction was found to have been correct at autopsy. There may be bruits. Especially, of course, pulse inequalities in a patient with severe chest pain suggest a dissecting aneurysm. When cutaneous ecchymoses appear over the chest or abdomen, one can be sure of rupture or partial rupture of the aneurysm and seepage to the outside. Other symptoms may include bleeding into the lungs, with hemoptysis, or into the gastrointestinal tract and melena. Hoarseness may occur as a result of pressure on the trachea or recurrent laryngeal nerves.

Exertion has been suggested as an initiating factor in this condition. Again, we may consider this patient's riding a bicycle. About 15 per cent of patients have had the onset of the dissecting aneurysm while they were either under emotional or physical stress. Trauma may have a role. Other etiologic factors are listed in Table 2.

TABLE 2

FACTORS IN THE ETIOLOGY OF DISSECTING HEMATOMA

1. Congenital—Marfan's syndrome; coarctation of the aorta.
2. Frequency greater with age.
3. Hypertension.
4. Medial degeneration, cystic necrosis of media.
5. Pregnancy.
6. Atherosclerosis.
7. Arteritis.

The prognosis in this condition is unusually poor. Perhaps a fourth to a half of patients with dissecting aneurysm die within a few minutes, and perhaps 60 per cent of them die within 24 hours. Such was the pattern for the patient under discussion. However, 9 per cent survive for at least six months.

In summary, I think this individual suffered from a dissecting hematoma or aneurysm of the aorta. The signs and symptoms are best explained by this diagnosis. The terminal episode represented rupture of the aorta into a body cavity, with shock and exsanguination.

Dr. Lawrence: Dr. Connor, to support your contention that this patient was very active, there was a history that within the previous 12 months he had been climbing mountains with the Mountaineers. He rode his bicycle every night to work, but there was no history of trauma.

I should like to talk about what you have called "massive blood transfusions." This patient was not in shock at the time he appeared at the hospital, and had a blood pressure of 150/80 mm. Hg. Blood was not started immediately, but as soon as the incision was made we noticed a considerable amount of hemorrhage—an unusual amount of hemorrhage —and during the operative procedure, he received 2,000 ml. of blood. You have frequently suggested that he had a dissecting aortic hematoma. It could have been anywhere from the bifurcation of the aorta to the origin of the ascending aorta. We should like you to tell us where you think the dissecting hematoma was, if you please.

Dr. Connor: From the evidence in the protocol, I assume that the patient did have involvement of the aortic ring, which produced the diastolic murmur; that he also had involvement of the renal arteries, leading to azotemia; and, of course, that the dissection extended into the right iliac artery.

Dr. Lawrence: It would be customary for us to show the patient's x-rays at this time, but for the moment, Dr. Pribram "refuses" to show them. Thus, we should like to have the pathologist give us his findings, and we shall then come back to Dr. Pribram.

Dr. E. E. Mason, Surgery: How long does the dissecting aneurysm have to be present to produce a uremia?

Dr. Connor: As I have indicated, this is a difficult problem to explain. I am without a satisfactory answer. I assume that to involve the renal arteries and to cut off the renal circulation more or less completely, the process would have had to continue for more than 24 hours. Such a timetable does not seem to fit the history, but sometimes dissection is painless.

Dr. Lawrence: Dr. Givler, would you discuss the findings at autopsy?

Dr. R. L. Givler, Pathology: At the time of autopsy, there was external evidence of the patient's bleeding problem. There were widespread ecchymoses and petechiae over the body. Upon opening the peritoneal cavity, the prosector found close to 500 ml. of free, unclotted blood. In addition, there was clotted blood in the region of the recent vascular surgery. The aorta and adjacent iliac vessels were removed in one piece and were perfused with water under high pressure to test the adequacy of the surgical closure, but there was no evidence of leakage at the site of the endarterectomy. However there was a leak in the right iliac vessel, distal to the second arterial incision and separate from it.

An intimal tear was found in the arch of the aorta, near the origin of the left common carotid artery. From that intimal tear to the aortic valve, there was deposition of fibrin between the layers of the aortic media. Distal to the intimal tear, the aorta was involved by a medial necrosis which extended to the iliac arteries. However, the area of medial necrosis was not complicated by dissecting hemorrhage. A cleavage plane occurred at the junction of the inner two-thirds and outer one-third of the media, which is the usual site for either medial necrosis or dissecting aneurysm. One microscopic feature that is seen in medial necrosis is an increase in ground substance. Because of its staining characteristics, it gives a rather mucoid appearance to the aortic media. Another is seen in the elastic fibers of the media. The role that either of these plays in the pathogenesis of medial necrosis has not been established.

In summary, the aorta was involved by medial necrosis extending from the thoracic arch to the iliac arteries, but there was no associated dissecting hematoma in this area. The portion of aorta from the aortic valve to an intimal tear in the aortic arch was involved by a dissecting aneurysm. It is possible that the medial necrosis led to the initial obstruction of the iliac artery, but we cannot prove it by means of the description or the sections that were available at autopsy. In addition, the autopsy protocol states that in the pulmonary arteries there was "evidence of thromboembolic phenomena bilaterally," but insufficient details have been included to indicate the extent of embolization. In addition to intraperitoneal hemorrhage and hemorrhages in the skin, there was some luminal hemorrhage in the stomach and intestine, but no source was apparent other than mucosal hemorrhages. The cause for the bleeding problem was not apparent at autopsy. The tissue sections of liver and kidney do not suggest severe disease in either site. The renal arteries were described as patent.

Dr. Lawrence: Dr. Givler, I have found that a diagnosis of subendocardial hemorrhage with necrosis of adjacent myocardium was noted on the final autopsy sheet. How would you explain that finding?

Dr. Givler: That was described in the autopsy protocol, but I didn't see it in the tissue sections. The patient did not have open-chest cardiac massage. Rarely, a dissecting aneurysm will extend proximally into the heart, and when it does it may split the septum, and the hemorrhage will present in the right ventricle. But there was no such extension of the aneurysm in this case. I don't know of any other reason.

Dr. Lawrence: When this patient was admitted to the hospital, it was our impression that he probably had a clot, an embolus, in his right iliac artery. One week later, another patient—a 63-year-old man—was admitted to the hospital with a history of pain while driving his car down the street. His physician had seen him and had sent him to this hospital with a diagnosis of dissecting aneurysm. Findings in that patient were similar to those in the man whom we have been discussing, with the exception that the lesion was in the opposite leg, with the left femoral artery occluded. I thought he had a dissecting aneurysm of the thoracic aorta, extending down into his abdomen to block the iliac artery. The only way I could prove it was to do an aortogram. A delayed intravenous aortogram outlined the ascending aorta, thoracic aorta, abdominal aorta, and an occluded common iliac vessel on the left. I could not demonstrate a dissection in that patient. We explored his abdomen, and found a dissecting-type aneurysm in his abdomen. We resected it, replaced the aorta with a graft, and noted that there was some clotted material on the lateral wall of the aorta.

In some of these patients, one can't tell how far the clot extends or where the clot begins. This second man had an uneventful hospital course and went home, but eight days after surgery he died there. An autopsy was done by his referring physician, and the diagnosis in his letter was, "I told you so; he had a dissecting thoracic aortic aneurysm."

Now I should like to ask Dr. Pribram what help he could offer us in making a diagnosis, or how we can make this diagnosis with x-rays.

Dr. H. F. W. Pribram, Radiology: The reason that I didn't show the films earlier is that I find them much easier to interpret when I know the diagnosis. Figure 1 is the chest x-ray which was reported as showing left ventricular enlargement. It does, but in addition, on a clear day and with good visibility, I think a radiologist can observe another feature—one in the region of the aortic knuckle. There is a double shadow with a radiolucency on the outer side of the aortic knuckle.

At this stage I think it would be worthwhile to discuss the differences between an acute dissection and a chronic dissection. In the acute dissection, the findings are enlargement of the anterior mediastinum; displacement of the trachea; a loss of the outline of the descending aorta; an enlarged heart;

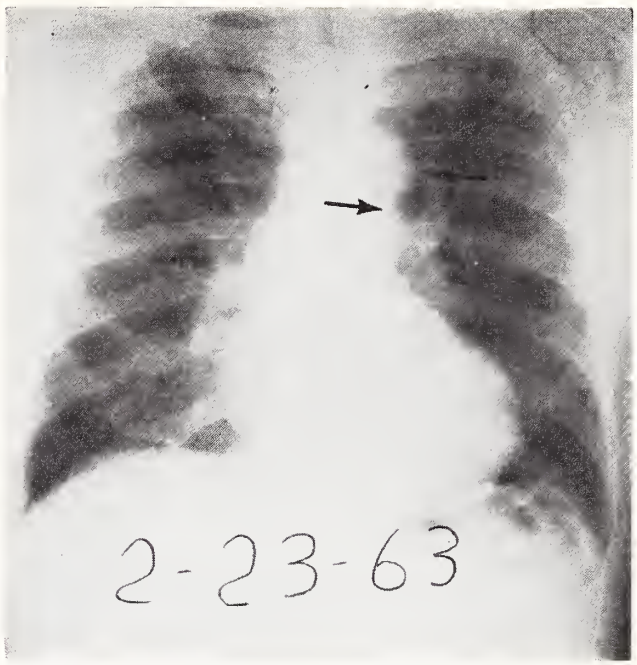

Figure 1. Chest x-ray showing left ventricular enlargement and a double shadow in the region of the aortic knuckle, with a radiolucent halo.

and possibly a hemothorax. Enlargement of the heart may be due either to rupture into the pericardium, or to left ventricular enlargement. Usually one can't tell the difference because the patient is very ill.

In chronic dissection the changes are somewhat different. The aortic knuckle rises up, or as in this case, there may be a double shadow. A relative radiolucency on the outside of the denser shadow represents the true lumen of the aorta. Again there is left ventricular enlargement, and it persists until there is reentry of the false channel into the true lumen. Afterward the heart shadow may decrease in size. There may be gross calcification of the descending aorta, and there is usually an abrupt change in caliber at the level of the diaphragm.

One of the better ways of diagnosing dissection is to see progressive enlargement of the descending aorta. Syphilitic aneurysms usually occur in the ascending aorta, and dissections in the descending aorta. The thickness of the arterial wall may be judged from the calcification and the radiolucency outside it. If it approximates 1 cm., there is a dissection. In this patient, I think there was a chronic dissection in the region of the aortic knuckle.

Here is a patient who was followed for over a year, and you can see that when he first came to the hospital he had a fairly normal chest x-ray (Figure 2). Figure 3 shows that he had begun to get a little bit of a bulge in the descending aorta —insufficient evidence of a dissection. He also had a little left ventricular enlargement. In Figure 4, the bulge was getting bigger. He was beginning to

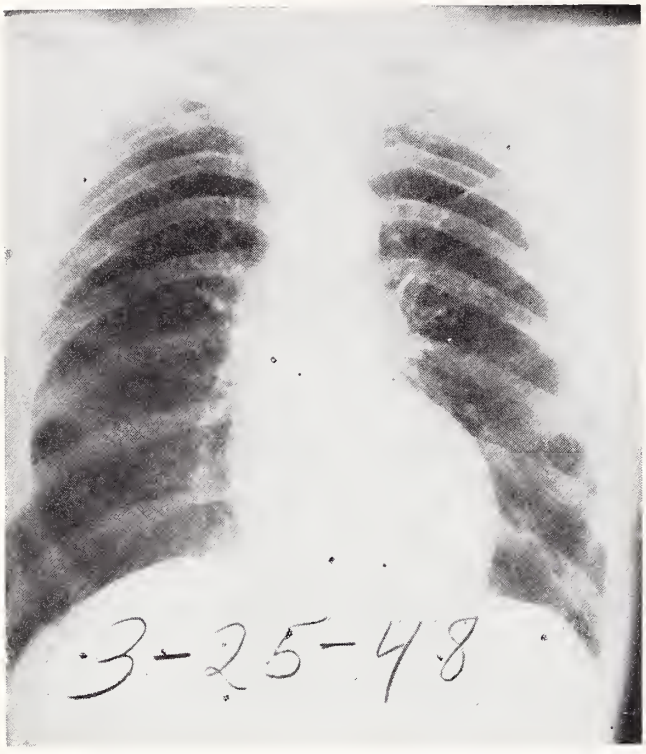

Figure 2. Chest x-ray showing left ventricular enlargement, with some unfolding of the ascending aorta but no other abnormality.

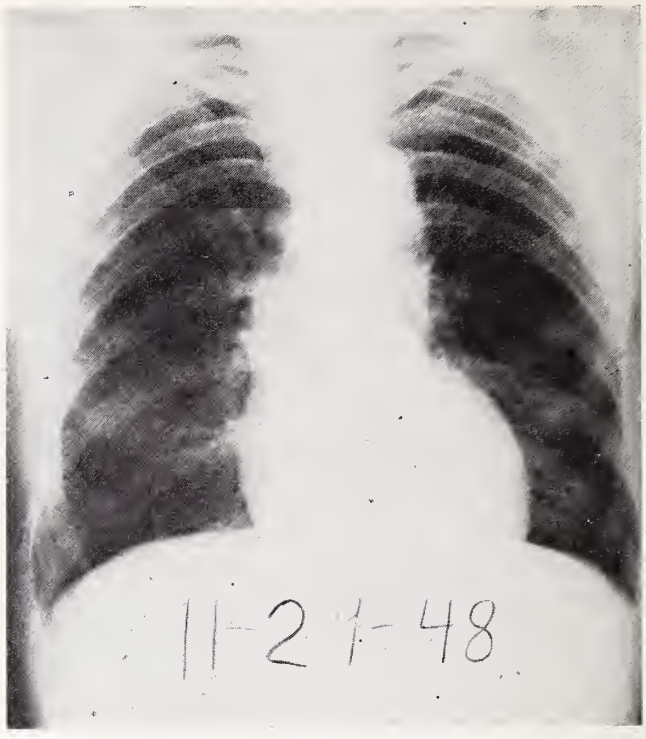

Figure 3. Chest x-ray of same patient eight months later, showing some unfolding of the descending aorta.

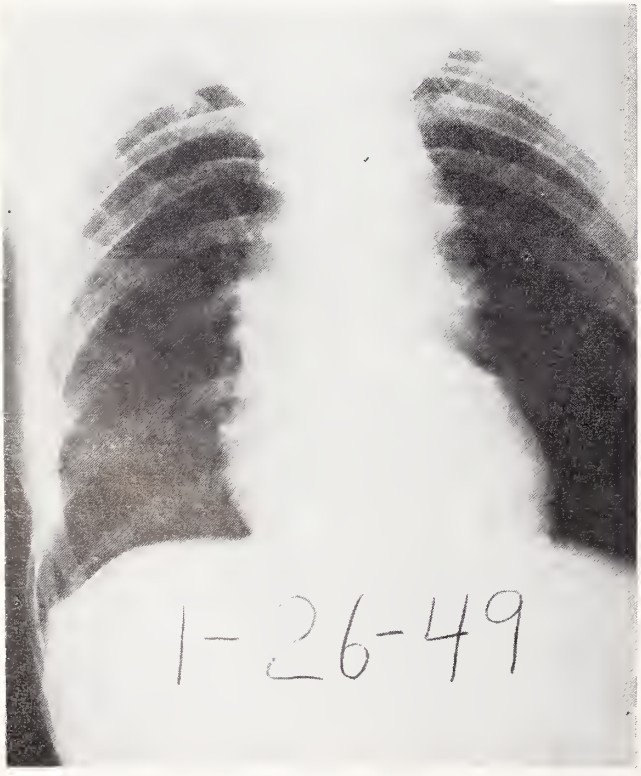

Figure 4. Chest x-ray two months later, showing considerable bulging of the descending aorta.

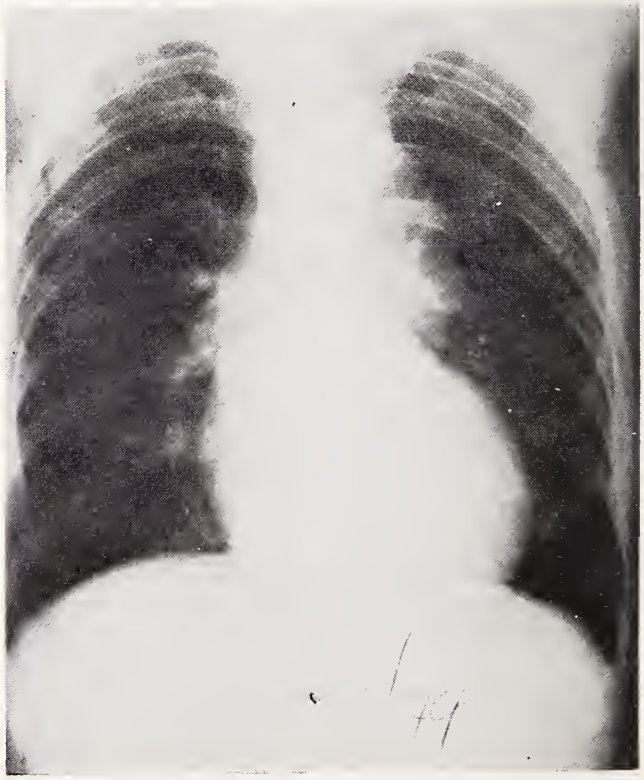

Figure 5. Final chest x-ray, showing considerable bulge of the descending aorta which has dissected.

fulfill the criteria for a dissection—again, a chronic dissection. Figure 5 is the final picture, taken before he went to see the pathologist.

Dissections are usually more common in the descending than in the ascending aorta, although sometimes they may rupture into the pericardium. If one is dealing with a dissection, I think he must make the diagnosis fairly early. The best way still, in my view, is aortography. I don't think there is any place for intravenous aortography, and I think that was demonstrated earlier in the discussion.

Provided that the femoral pulses are present, I see no contraindication to a percutaneous retrograde catheter aortogram, because the catheter will almost always pass into the true lumen. If one then performs the aortogram, the intercostal vessels will fill—let's say on the right side—but they will not fill on the left side where there is a dissection. Also, the thickness of the aortic wall will be shown. Occasionally the catheter will pass up into the false lumen, but no great harm is done, and it is another way of making the diagnosis. If the femoral vessels are occluded and the subclavians are patent, I think one can introduce a catheter through the axillary artery and perform an aortogram in that way. Other plain-film changes of a chronic dissection that I haven't mentioned are aneurysmal dilatations of the innominate or subclavian arteries. One may even find rib notching when these vessels have become occluded.

So in summary, I think the chest film showed the picture of a chronic dissection, the left ventricular enlargement having been due to aortic regurgitation.

Dr. Lawrence: It disturbs me somewhat that you keep calling this patient a "chronic dissector." We saw him a few hours after he had his initial pain, and I think we should return to the question Dr. Mason asked originally. These dissecting aneurysms may occur in one of three places. Type I rupture occurs above the aortic valve, and may dissect down as far as the bifurcation of the aorta. Type II is a limited dissection in the ascending aorta, ending at the root of the innominate artery. Type III dissection begins below the origin of the left subclavian, or beneath the left common carotid artery. I think these types are very important as far as the therapy is concerned. Type I requires the use of a pump oxygenator and extracorporeal circulation. All we have to do is open the artery, oversew the upper and lower edges proximally and distally to redirect the blood back into the aortic lumen. Type II also requires a pump oxygenator. One resects the aneurysmal dilatation in the ascending aorta, and replaces it with a graft. Type III requires the use of a simple left atrial femoral bypass pump, resection of the dissecting area, and replacement with the graft.

I should like to ask Dr. Connor to comment further about this patient's hemorrhagic problem, and also to discuss a different type of therapy for acute dissecting thoracic aortic aneurysm. This patient's history shows that from 1938 to 1946 he was seen frequently in the outpatient clinic for nosebleeds. His blood pressure at that time was 128/76 mm. Hg. He had never been hypertensive. I should like to hear some comments in regard to this patient's hemorrhagic problem, which disturbed us tremendously, and an evaluation of a recent paper by Wheat, of the University of Florida, in regard to conservative therapy in dissecting thoracic aortic aneurysms. At the present time, I understand, we have a patient in this hospital who is receiving this type of therapy.

Dr. Connor: With regard to the patient's old history of nosebleeds, did they occur when he was struck upon the nose, or did they occur spontaneously?

Dr. Lawrence: On one occasion he had been hit; the rest of the nosebleeds were spontaneous.

Dr. Connor: Now that this additional history has been revealed, it seems that the patient may have had a capillary abnormality manifested by nosebleeds—a capillary abnormality that may well have influenced his situation at the time of surgery. Another possibility is that he may have been clotting behind the dissected area, and may have been expressing thrombin and other thromboplastic substances into his circulation. These substances might have stimulated further clotting intravascularly, so as to produce a partial defibrination syndrome. Dr. Givler has indicated that a great deal of fluid blood was found which did not clot. This suggests defibrination or fibrinolysis.

With regard to conservative treatment for dissecting aortic aneurysm, all I can say is that in my opinion the only definitive treatment is surgical, and since most of these people die very abruptly, I think that whatever can be done surgically should be undertaken as soon as possible.

Dr. Lawrence: DeBakey and his group reported 179 cases of acute ruptured thoracic aorta with only 21 per cent mortalities. Wheat, in his article, reported on six patients whom his group had treated. They used reserpine; they administered arfonad to lower the patients' blood pressure and put them into a chronic state; and later on they resected them. It was of interest to me that they got their idea for treatment from the management of turkeys with ruptured dissecting thoracic aortic aneurysms. They started putting reserpine in the turkeys' feed, and they claim they were able to prevent the loss of many turkeys as a result of the ruptured thoracic aortic aneurysms. We should be very glad to have any questions or comments from anyone.

Dr. E. L. DeGowin, Internal Medicine: I think it might be worthwhile to find out whether any of the aneurysms labeled Type I have healed completely. A number of years ago a woman on the

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here & here & here & here

No topical treatment can

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metronidazole

Flagyl eliminates the difficulties and frustrations that have long attended the treatment of trichomonal infection.

These difficulties arose mainly from:

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2) the failure of any previously known agent to prevent reinfection by eradicating the disease in male consorts.

The introduction of Flagyl removed both of these long-standing deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced a cure rate of up to 100 per cent in large series of patients.

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Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

Dosage Forms

Oral–250-mg.tablets/Vaginal–500-mg.inserts

SEARLE

Research in the Service of Medicine

ward had some other disease, and we noticed a peculiar shadow in her mediastinum by x-ray. No one had the faintest idea what it was. She came to autopsy, and we found that at some time previously—many years before—she had had a tear in the arch of the aorta with resulting concentric cylinders of the aorta, communicating with the proper lumen through another tear at the bifurcation below. It had healed completely, and thus had been compatible with long life.

Dr. Lawrence: Are there any other questions? Dr. Connor?

Dr. Connor: At this College of Medicine I think we should emphasize Dr. Ponseti's pioneering work in finding that a substance from sweet peas that has been used to produce experimental scoliosis in rats can also cause dissecting aneurysms of the aorta.[3] Of course, this entity correlates well with Marfan's syndrome, in which the degeneration of the ground substance of the media is postulated as the cause of the dissecting aneurysms found in that disease.

Dr. Lawrence: I am still somewhat disturbed about the bleeding problem that this patient had. Knowing that he bled abnormally as soon as the incision was made, knowing that there was no enlargement of his abdomen, for we measured it and since only 500 cc. of blood was found in the abdomen at the time of autopsy, I did not think that the leak at the anastomosis was the cause of death. Now, would Dr. Givler care to make any additional comments about the amount of blood found in the abdominal cavity at autopsy?

Dr. Givler: The leak was not at the sites of arteriotomy. Apparently it was distal, and it was attributed to the medial necrosis. There was about 500 ml. of free blood in the peritoneal cavity, but there were also blood clots, and we don't know how much blood they represented.

Dr. Lawrence: Finally, in the discussion this afternoon, it also disturbed me to hear Dr. Pribram say that if a patient has a dissecting aneurysm, one can pass a catheter retrograde. "It is all right if you pass it up the false lumen," he said. "It is of value in making the diagnosis." I wonder what would happen if one injected dye at a high pressure and blew the thing out.

Dr. Pribram: Of course there is a difference between a surgical arteriogram and a radiologic one. When you do a surgical arteriogram, you are so confident that everything is fine that you never make a test injection. But in the radiologic arteriogram, we always do a test injection. So we don't blow things apart with a pressure injection.

SUMMARY OF NECROPSY FINDINGS

1. Dissecting aneurysm of the abdominal and thoracic portions of aorta (medionecrosis).
2. Hemoperitoneum.
3. Luminal gastrointestinal hemorrhage, source not determined.
4. Bilateral pulmonary emboli.
5. Status post-endarterectomy, right iliac artery.

STUDENTS' DIAGNOSIS

Dissecting aneurysm of the aorta.

DR. CONNOR'S DIAGNOSIS

Dissecting aneurysm involving aortic ring, origin of renal arteries and the right iliac.

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2. Burchell, H. B.: Aortic dissection (dissecting hematoma; dissecting aneurysm of aorta). Circulation, **12**:1068-1079, (Dec.) 1955.
3. Ponseti, I. V., and Baird, W. A.: Scoliosis and dissecting aneurysm of aorta in rats fed with Lathyrus odoratus seeds. Am. J. Path., **28**:1059-1077, (Nov.-Dec.) 1952.

Instruction in General Practice

An article in the April, 1966, issue of the NEBRASKA STATE MEDICAL JOURNAL by Dr. Fay Smith, professor of general practice at the University of Nebraska College of Medicine, describes the work of the pioneer in general-practice instruction for undergraduates, Dr. Robert Scott, of the University of Edinburgh.

Dr. Scott, a man in is mid-fifties, is a graduate of Edinburgh who specialized in public health and preventive medicine. With the advent of nationalized medicine in 1945, he acquired a family clinic for use as a service and teaching facility for his University. He now has two such clinics in economically depressed areas of Edinburgh, and has five full-time family physicians assisting him.

The family-practice teaching is given to third-year medical students, during a three-month period each. A student spends two or three hours on three afternoons per week at one of the clinics.

Cases that the students see are not selected ones. They see them "just as they come." Patients who have "nothing wrong with them" do actually come for some reason. Students find that they constitute a large segment of any practice, and learn to deal with them. A student may see 10 to 15 patients a day, and he may make house calls after the patient has been seen by the supervising physician, and he follows the patient to the hospital if he is hospitalized. He writes reports only on the patients whom he has seen by himself.

Once a week the full-time and part-time instructors hold seminars with the students, in groups of six to nine. All groups discuss a particular subject on the same day. The students are also given reading assignments.

The students have accepted the program with enthusiasm, but no studies have been made to determine how many students may have been influenced to enter family practice as a result of this program. Much social orientation is given to the students, with emphasis on solving family problems.

Coming Meetings

IN STATE

May 5 — **Lilly Seminar,** Denison Country Club, Denison.

May 20 — **Psychiatry for the General Practitioner,** University of Iowa Department of Psychiatry, Iowa City.

June 11 — **Iowa Lutheran Hospital Day,** Des Moines.

CONTINENTAL U. S.

May 1-5 — **North American Federation, Congress of the International College of Surgeons,** Shamrock Hilton Hotel, Houston.

May 5-7 — **Ear, Nose, Throat,** University of California, San Francisco.

May 6 — **10th Annual Symposium on Infectious Diseases, American Academy of General Practice,** University of Kansas Medical Center, Battenfeld Auditorium, Kansas City, Kansas.

May 6-8 — **Third Annual Conference, "Respiratory Problems in the Neonate, Infants and Children,"** Children's Memorial Hospital, Chicago.

May 9-10 — **Postgraduate Medical Study, Cardiac Auscultation,** University of Kansas School of Medicine, Kansas City, Kansas.

May 9-10 — **Postgraduate Medical Study, Otorhinolaryngology,** University of Kansas Medical Center, Battenfeld Auditorium, Kansas City, Kansas.

May 12-15 — **16th Annual Meeting, Student American Medical Association,** Statler-Hilton Hotel, Los Angeles.

May 13 — **The Modern Cardiovascular Practitioner, University of California,** San Francisco, Redwood Empire Heart Association, Santa Rosa.

May 13-14 — **Convulsive Disorders,** University of California, San Francisco.

May 13-14 — **Symposium on the Battered Child Syndrome,** University of Colorado School of Medicine, Denver.

May 14 — **Scientific Session, Iowa Heart Association,** Hotel Fort Des Moines, Des Moines.

May 16-20 — **Animal and Clinical Pharmacologic Techniques in Drug Evaluation (part II) Hahnemann Medical College and Hospital,** Marriott Motor Hotel, Philadelphia.

May 16-20 — **Postgraduate Course in Physiological Aspects of Cardiopulmonary Disease, American College of Physicians,** Emerson Hall, Indiana University Medical Center, Indianapolis.

May 20-22 — **Tri-State Annual Meeting, Association of Blood Banks,** Pfister Hotel, Milwaukee.

May 20-22 — **Annual Meeting, Missouri Society of Anesthesiologists,** Rock Lane Lodge, Table Rock Lake, Missouri.

May 21 — **11th Annual All-Day Scientific Meeting, Michigan Society of Anesthesiologists,** Sheraton-Cadillac Hotel, Detroit.

May 21-22 — **Health of the School Child,** University of California, San Francisco.

May 21-24 — **Annual Meeting, South Dakota Medical Association,** Huron.

May 23-25 — **1966 Annual Meeting, American Thoracic Society,** San Francisco.

May 23-27 — **Workshop on Drug Metabolism, Drug Research Board of the National Academy of Sciences, National Research Council and the Pharmaceutical Manufacturers Association Foundation,** New York University Medical Center, New York.

May 24-25 — **Surgery, U. of I. College of Medicine.** Ronneberg's Restaurant, Amana (May 24), University Hospital, Iowa City (May 25).

May 24-28 — **Annual Meeting, Ohio State Medical Association,** Sheraton-Cleveland Hotel, Cleveland.

May 27-30 — **Third Hemispheric Congress, Pan American Cancer Cytology Society,** Americana Hotel, New York City.

June 3-4 — **Medical Alumni Clinic Days, University of Colorado School of Medicine,** Denver.

June 5-8 — **First International Congress on Smoking and Health,** New York Hilton, New York City.

June 6-10 — **13th Annual Anesthesiology Review Course, Anesthesiology Service,** Wilford Hall USAF Hospital, Lackland Air Force Base, Texas.

June 9-11 — **Initial Emergency Care and Transportation of the Sick and Injured, Committee on Injuries of the American Academy of Orthopaedic Surgeons,** Police Academy, New York.

June 13-17 — **Symposium, "Basic Sciences Related to Anesthesiology," Departments of Anesthesiology, Montefiore Hospital and Medical Center and Albert Einstein College of Medicine,** Montefiore Hospital and Medical Center, Bronx.

June 16-19 — **Second Biennial Meeting, California Society of Anesthesiologists,** Sahara-Tahoe Hotel at South Shore, Lake Tahoe.

June 17-18 — **American Rheumatism Association,** Denver Hilton Hotel, Denver.

June 25 — **American Academy of Tuberculosis Physicians,** LaSalle Hotel, Chicago.

June 25-26 — **American Diabetes Association,** LaSalle Hotel, Chicago.

June 26-30 — **Annual Meeting, American Medical Association,** Palmer House, Chicago.

June 27 — **American Association for the Study of Neoplastic Diseases,** Conrad Hilton Hotel, Chicago.

June 27 — **American Association for the Study of Headache,** Conrad Hilton Hotel, Chicago.

June 27-30 — **11th Annual Meeting, Health Physics Society,** Shamrock-Hilton Hotel, Houston.

June 29-July 2 — **American Society of Maxillofacial Surgeons,** Sheraton-Chicago Hotel, Chicago.

June 30-July 2 — **Symposium on Clinical Aspects of Renal Disease—Ischemic Heart Disease and Cardiac Disease, sponsored by Tidewater Heart Association, Council on Clinical Cardiology, American Heart Association,** Cavalier Hotel, Virginia Beach, Virginia.

ABROAD

May 23-27 — **Refresher Course in Anesthesia,** McGill University, Montreal, Canada.

June 16-22 — **Fifth World Congress on Fertility and Sterility, Swedish Society of Obstetrics and Gynecology,** Stockholm, Sweden.

June 26-July 2 — **Seventh International Congress of Gerontology,** Vienna, Austria.

June 30-July 5 — **International College of Surgeons, New England and East Canadian Region Meeting,** Mont Gabriel, Quebec, Canada.

Editorials

THE POSSIBLE OR THE PROPER

A recent news report by the NEW YORK TIMES News Service of a meeting of the Child Study Association of America is a disconcerting one. According to the newspaper, a succession of experts on family life and sexual behavior chastised American society for its hypocrisy in clinging to nineteenth-century morality in the face of technologic and social change.

The news story quotes a professor of family life at Oregon State University as saying, "The availability of information and devices to control conception and venereal disease have, in fact, created sexual freedom. The question is whether we can deal with youth as though they are free to choose whether or not to have premarital sexual relations."

The assistant director of the Center for Youth and Community Studies at Howard University was quoted as saying, "For the large majority of young people, developments in contraceptive technology can provide an opportunity for healthy sexual freedom, depending upon the extent to which the adult world is able to relinquish the elaborate system of myth, mystery and emotionalism that now typifies its response to sex."

An article on "The Physician and the Sexual Revolution" by Max Levin, a clinical professor of neurology at the New York Medical College,* also quotes the above-mentioned professor of family life at Oregon State in pointing out that the traditional theologic position of church groups conflicts with "the new morality." The new sophisticated attitude is represented by the following quotation from Robert A. Harper, a marriage counselor: "All the realistic evidence points to the desirability not only of fully educating children about sex, but of making contraceptive and prophylactic information and equipment completely available to all persons who reach the age of fertility. . . . It is only because we keep rigidly reciting to ourselves the moral ditty about the catastrophic nature of premarital intercourse that we cannot even see, let alone do anything constructive about, our completely unnecessary, utterly idiotic premarital sexual morality."

The justification for the "new morality" is said to consist of the technological and social changes which have taken place during the past few decades. Obviously, the "new morality" is dictated by the virtual removal of physiologic consequences that once were dreaded, rather than by what has always been good and right and wholesome, and by ideals and by standards of conduct long recognized as proper and virtuous in western civilization.

Does each technologic advance mean the abandonment of another standard of behavior? Does each social change justify a lessening of individual restraint? Does the fact that a young man has a sports car with a 250 h.p. motor warrant his taking your daughter or your neighbor's daughter on a 120 m.p.h. ride? Or does the mere fact that modern biologic technics can prevent conception make it proper for youngsters to "go all the way" when they park the car by the roadside?

The protagonists of the new morality teach that premarital sexual experiments are conducive to more effective sexual adjustment in marriage. Yet there are millions of happily married couples who will testify that such practices are quite unnecessary, and that there are many factors other than sex that are fundamental to a happy marriage. Mutual respect, mutual trust and mutual love that transcends the physical are the elements which assure a successful marriage. Those millions of couples do not deny the importance of sex, but they insist that it has its proper time and place.

Isn't the process of growing up complex enough without making it more so? Has our society reached the sad state at which moral standards change to meet the whim of each unfledged extremist? The "new morality," with its sexual freedom, constitutes one of the most serious problems of present day society. Physicians should play a leading part in meeting the challenge, and in helping restore a wholesome concept of the role of sex in human relationships. If the institution of marriage and of the family is to survive, this challenge must be met. Proper sex education is necessary, but knowledge should not confer license.

"Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue and if there be any praise, think on these things."

SPINACH AND METHEMOGLOBINEMIA

At long last, children may have a sound basis for their refusal to eat spinach. The vegetable most esteemed by the cartoon figure Popeye has long been thought to possess unusual merit as a food for babies and children, and mothers have dutifully poked it into their protesting offspring. A recent editorial in the BRITISH MEDICAL JOURNAL*

* Levin, Max: Physician and sexual revolution. NEW ENGLAND J. MED., **273**:1366-1369, (Dec. 16) 1965.

* Spinach—risk to babies (Editorial). BRITISH M. J., **1**:250, (Jan. 29) 1966.

tells of a report by two German physicians on 14 children who developed methemoglobinemia after eating spinach. The cause was a high concentration of nitrites in the vegetable, just as in the "well-water cyanosis" observed in Iowa, the cause was a high concentration of nitrates which were converted into nitrites by bacterial action in the intestinal tract.

The 14 children were between two and 10 months of age. The symptoms depended upon the amount of nitrite absorbed, and there was all the way from a pale-gray cyanosis to a deeper one accompanied by a rapid pulse and rapid breathing. Most of the infants continued to play and to smile, but some of them collapsed. Vomiting and diarrhea occurred in some of the babies, and those symptoms were attributed to the irritating effects of the nitrites upon the stomach and intestine. The characteristic chocolate coloring of the blood was striking. One baby died soon after admission to the hospital, and was found to have a methemoglobin concentration of 80 per cent.

According to the report, fresh spinach contains up to 180 mg. of nitrate per 100 Gm., but there is no nitrite content. The concentration is higher when the spinach has been grown in soil fertilized with manure. Within 24 to 48 hours after picking, the nitrate level falls and the nitrites increase to a level of 66 mg./100 Gm. It is asserted that nitrites are found after fresh-frozen spinach has been thawed, but the concentration of nitrite in the vegetable marketed in glass jars is low. In the process of cooking, about 80 per cent of the nitrate is dissolved, and by draining and pressing the vegetable, one removes most of the nitrate. In Germany, however, the water in which it has been cooked is often used to prepare a spinach puree, and thus the nitrate content is conserved.

Of interest is the explanation for the known fact that babies are especially susceptible to agents which cause methemoglobinemia. Fetal hemoglobin is much more readily oxidized to methemoglobin. In the newborn, 60 to 80 per cent of the total hemoglobin is fetal hemoglobin, and by three months of age the proportion is reduced to 30 per cent.

SYMPTOMATIC HEART BLOCK

A report on the results of transvenous electrical pacing of the heart from Maimonides Hospital, Brooklyn, New York,* is a dramatic record of the progress which has been made in the management of symptomatic heart block. The report consisted of the experience with transvenous intracardiac stimulation of the heart carried out on 96 occasions in 78 patients from May, 1961, to July, 1964. This technic was used especially in the temporary management of A-V block with Stokes-Adams syndrome, but it was also used in other serious disturbances of cardiac rhythm. It was often a temporary expedient until a permanent pacemaker could be implanted. In 40 of the patients, an attempt was made to control the symptoms by means of drugs before the transvenous stimulation.

The ages of the 78 patients ranged from 48 to 89 years. Almost 90 per cent were over 60 years of age, and 17 per cent were over 80 years old. The group consisted of 35 women and 43 men. In 73 of the 78 patients, the diagnosis was arteriosclerotic heart disease. However none of the group had acute coronary disease. In 29 of these patients there was a complete, permanent A-V block; in 19 there was complete A-V dissociation with transient episodes of partial heart block or regular sinus rhythm. Atrial flutter-fibrillation was present in 23 patients with complete heart block or an extremely slow ventricular response. Some of the group had transient episodes of sinus rhythm or atrial fibrillation without heart block. Others had serious disturbances of rhythm which led to heart failure. Postmortem examination confirmed the diagnosis of coronary artery disease in 11 patients, and in the remainder the diagnosis was based on a history of myocardial infarction or typical angina pectoris.

Electric stimulation of the heart was done by introducing a radiopaque electrode catheter through a vein into the right ventricle. The tip of the catheter was positioned in the apex of the chamber under fluoroscopic visualization. The proximal end of the catheter was connected to a battery-powered transistorized pacemaker. The site of cutdown and insertion of the catheter was usually the saphenous vein, but the jugular and antecubital veins were used occasionally. The patients were all attached to a monitor-pacemaker, and a defibrillator was immediately available. The pacing rate was usually 70 per minute. The duration of transvenous pacing in this group of 78 patients varied from two hours to 29 days, but it was most often done for one to 14 days. Prophylactic antibiotics were used routinely for three days in almost every patient. Anticoagulant therapy was also carried out in all patients during the latter part of the series.

According to the authors, "immediate, satisfactory pacing was obtained in all patients except one." The exception was an 85-year-old woman in severe congestive failure who developed cardiac standstill after insertion of the catheter, and in whom there was no ventricular response despite stimulation with high voltages. Three other patients died during the procedure but before the catheter could be properly positioned. Those three patients were all elderly, and were moribund when the catheter was inserted. Seven patients died after one to nine days of pacing by the transvenous method. In February, 1965, at the time the report was submitted and about seven months after completion of the study, 26 of the 78 patients were known to be dead.

* Yuceoglu, Y. Z., Lunger, M., and Dresdale, D. T.: Transvenous electrical pacing of heart. AM. HEART J., 71:5-15, (Jan.) 1966.

Editorials continued...

As one might imagine, complications of transvenous pacing were not uncommon in elderly patients with serious heart disease. Repositioning of the catheter was necessary in 19 instances. During insertion of the catheter and before it could be positioned properly, ventricular tachyarrhythmia required defibrillation in nine patients. One of them required defibrillation eight times, and another four times, yet despite these discouraging complications, both patients survived. The investigators found that once an effective cardiac pacing had been established, the development of ventricular tachyarrhythmia was uncommon. On six occasions, ventricular standstill occurred which necessitated prompt external pacing of the heart. One patient with regular sinus rhythm but with periods of cardiac standstill developed repeated episodes of standstill whenever the catheter touched the wall of the atrium. After cardiac pacing had been established, no further episodes of standstill occurred. In two patients the catheter perforated the wall of the outflow tract of the right ventricle after several days of uncomplicated pacing. Upon operation, the tip of the catheter was found in the pericardium, but surprisingly there was very little bleeding. Both of those patients were restored to effective pacing when the catheter tip was pushed back within the heart, and both of them survived without further complication.

Significant infection developed in five patients. In two of them it was localized to the site of the cutdown. Two developed sepsis, and one patient were severe rheumatic aortic and mitral valvular disease developed ulcerative bacterial endocarditis of the aortic valve.

In 40 patients in this series, transvenous pacing was resorted to because drug therapy had proved unsatisfactory. Thirty-eight were treated without preliminary drug therapy. In the latter group the majority of the patients had repeated episodes of tachyarrhythmia, and many also had episodes of cardiac standstill. These patients were so treated because the immediate prognosis was considered extremely grave. In the judgment of the authors, a single documented episode of Stokes-Adams syndrome due to ventricular tachyarrhythmia is sufficient indication for electrical cardiac pacing. Transvenous pacing is also superior to drug therapy in the treatment of Stokes-Adams syndrome due to cardiac standstill, particularly in elderly patients, and especially if congestive failure and renal and cerebral manifestations are present.

The Brooklyn physicians assert that the external transthoracic electrical stimulator continues to be a vital and necessary therapeutic agent for emergency situations. At times, however, pacing by this method could not be achieved despite high voltages. In the experience with this group of patients, it was found that ventricular arrhythmias could be controlled only by continuous electrical pacing at a rate which eliminated ectopic impulses. External pacing for more than a few minutes is impractical because of painful contractions of the pectoral muscles and possible skin ulcerations and injuries.

The authors concluded that short-term electrical pacing of the heart by the transvenous method is "a relatively safe, effective, reliable and oftentimes lifesaving measure for the control of symptomatic heart block, particularly in anticipation of implantation of a permanent pacemaker." It was also found useful in recurring episodes of ventricular tachycardia-fibrillation which did not respond to drug therapy, and in the temporary management of those patients with extreme sinus bradycardia and in atrial fibrillation with a slow ventricular response.

Though it may appear that transvenous electrical pacing of the heart is a heroic measure to be used only as a desperate effort in the treatment of a hopeless condition, it obviously has a place in the temporary management of heart block and certain arrhythmias.

CEREBRAL HEMORRHAGE AND CEREBRAL INFARCTION

During the last few decades cerebrovascular disease has become an increasing problem, and one of the most perplexing aspects of its rise to prominence has been the concurrent decline of cerebral hemorrhage and increase of cerebral infarction. In the past, "apoplexy" or cerebral hemorrhage was the cause of death three times as often as cerebral infarction. Today, cerebral infarction is the more frequent of the two. The change has occurred as a result of a moderate reduction in the incidence of cerebral hemorrhage, and a marked increase in that of cerebral infarction. That changes in terminology have not been responsible is supported by the autopsy diagnoses in a large series of cases.

Various theories have been advanced to explain the reversal in incidence of these serious conditions. It has been suggested that cerebral hemorrhage is now prevented by hypotensive therapy, letting patients live longer and later fall victim to cerebral infarction. Some authors have contended that hypotensive therapy reduces the incidences of both hemorrhage and infarction, and still others have asserted that it reduces the hazard of cerebral hemorrhage but does not affect the long-term risk of progressive atherosclerosis of the blood vessels which supply the brain.

In an effort to bring some light to this perplexing problem, two British physicians, Prineas and Marshall, have published an excellent article

* Prineas, J., and Marshall, J.: Hypertension in cerebral infarction. BRITISH M. J., 1:14-17, (Jan. 1) 1966.

on it, reporting a study designed to demonstrate the role of hypertension in the genesis of cerebral infarction.* They point out that much of the confusion about cerebral infarction is due to the use of the term *cerebral thrombosis* in describing the clinical picture associated with cerebral infarction. As a matter of fact, they emphasize, it is uncommon to find evidence of arterial thrombosis in cases of cerebral infarction. Numerous alternative hypotheses have been offered. The clinical picture has been attributed to arterial spasm; to occlusion of minute vessels by fragmented emboli; to failure of collateral circulation because of induced systemic hypertension; and to occlusion or narrowing of the vertebral or carotid arteries in the neck by atheromata.

It has been demonstrated that most stenoses of the internal carotid artery are insufficiently narrow to have a significant effect on the blood flow. However, emboli formed on atheromatous plaques may explain the brain lesions. A combination of the two factors probably plays a part in the development of the infarction.

That hypertension is a contributing factor in the development of cerebral infarction has long been recognized. However the relationship between the two has not been clearly elucidated. In an effort to acquire a better understanding of the relationship, Prineas and Marshall studied a group of patients diagnosed clinically as suffering from cerebral infarction, and examined their characteristics after they had been separated into two groups according to their blood pressures. In a series of 700 cases of cerebrovascular disease, there were 134 patients 55 years of age or less in whom cerebral infarction had been diagnosed on the basis of clinical criteria. A cerebrovascular incident was attributed to infarction if the neurologic deficit lasted more than 24 hours, if there was no obvious source of emboli, and if the spinal fluid was clear, colorless and not under increased pressure. The study was restricted to patients 55 years of age or under because the clinical pattern is usually more distinct in that age group. In older patients, the pattern can be confusing because of the great likelihood of any of several other conditions that can produce the clinical picture of infarction.

The patients were divided into two groups according to their diastolic pressures on admission to the hospital suffering from stroke. Seventy-one had diastolic pressures below 110 mm. Hg and were referred to as "normotensives." Sixty-three had pressures above 110 mm. Hg, and were called "hypertensives." It was stressed that a sustained diastolic level of 105 mm. Hg is not normal, and that the division of patients into "hypertensives" and "normotensives" depending on whether or not their diastolic pressures fell above or below 110 mm. Hg was purely arbitrary, and was used for reasons of convenience. According to the authors, the pressure on admission differed markedly from subsequent readings in only four patients. In those individuals the pressure was lowered by complications such as shock, myocardial infarction, hypotensive therapy, etc.

The distribution of the patients' blood pressures was first compared with that of the normal population of the same age and sex. Then the patients were divided into arbitrarily designated "normotensive" and "hypertensive" groups. The former group was composed of 40 men and 31 women, and the latter was made up of 39 men and 24 women. As might have been expected, the largest number were in the 46-50 and the 51-55 year age groups. Changes in the fundi, electrocardiographic evidence of left-ventricular hypertrophy or strain, and x-ray evidence of cardiac enlargement were much more common in the "hypertensives" than in the "normotensives." Five patients in the "hypertensive" group had malignant hypertension with papilledema.

A history of a previous stroke (prior to the one that qualified the patient for the study) was elicited from 26 patients—nine in the group of 71 "normotensives," and 17 in the group of 63 "hypertensives." Brief episodes of neurologic disturbance, of less than 24 hours' duration, and what were thought to have been transient ischemic attacks had occurred in 19 of 75 infarcts about which information was elicited from patients in the "normotensive" group, and before 14 of 69 infarcts in the "hypertensive" group.

There was no significant difference in the modes of onset of strokes in the two groups. Convulsions did not occur in either group. The incidences of headache, vomiting and unconsciousness did not differ materially. In both the "normotensives" and the "hypertensives," 73 per cent of the lesions were diagnosed as occurring in the cerebral hemispheres, and there were equal numbers of them in the dominant and non-dominant hemispheres. One marked difference between the two groups was in the incidences of dysphasia in the dominant-hemisphere lesions. In 23 of the 28 such lesions in the "normotensive" group, dysphasia resulted. Contrastingly, dysphasia resulted in only 15 of 29 patients in the "hypertensive" group whose infarctions occurred in the dominant hemisphere.

The immediate disabilities were about the same in the "normotensive" and "hypertensive" groups, but the degrees of recovery were very different. In the former, 21 per cent of the 67 survivors showed little or no recovery, but in the latter only 6 per cent of the 60 survivors failed to recover significantly.

Electroencephalography was performed on 85 of the patients. A normal EEG was found more often in the "hypertensive" group than in the "normotensive" one. The difference was due to a higher frequency of asymmetry in the "normotensive" group.

Angiography was carried out in 47 patients in the "normotensive" group, and in 30 of the "hypertensive" patients. Abnormalities of both intra-

Editorials continued...

cranial and extracranial arteries were found much more often in the "normotensives" than in patients with elevated blood pressures.

The mean serum cholesterol was 228 mg./100 ml. in the "normotensives," and 209 mg./100 ml. in the "hypertensives"—not a very significant difference.

There were four deaths in the "normotensive" group during the acute phase. Necropsy was performed in three cases, and all showed large infarctions in a cerebral hemisphere. In the "hypertensive" group there were three deaths in the acute phase, and autopsy was performed in each case. Necropsy was also performed on three "hypertensive" patients who succumbed later—two from cardiac disease and one from penumonia. Four of the hypertensive cases showed small cystic softenings deep in a cerebral hemisphere. In three cases there was an intracerebral hemorrhage that had been misdiagnosed as an infarction.

The authors point out that the distributions of blood pressures on admission to the hospital for patients in both groups were higher than in the normal population. This finding conflicts with a commonly held belief that cerebral infarction is associated with low blood pressure. The confusion is attributed to a failure to distinguish between patients in whom cerebral infarction is an isolated event, and patients in whom it occurs in association with myocardial infarction or gastrointestinal hemorrhage that results in a fall in blood pressure. In most patients the blood pressure at the onset of a stroke did not differ from the usual blood pressure of that individual.

The study led to the conclusion that among patients with cerebral infarction who are free from complicating conditions which confuse the picture, two quite distinct groups can be differentiated, depending upon the degree of elevation of the blood pressure. In this study a diastolic pressure of 110 mm. Hg was used as the dividing line. Although at the onset of the cerebrovascular episode there are no distinguishing characteristics, the subsequent courses of patients in the two groups are distinctive. The so-called "normotensives" usually showed marked asymmetry of EEG, a high incidence of speech disturbance when the lesion was in the dominant hemisphere, and a high proportion of poor recoveries, indicative of a large lesion in the cortex or in the subcortical region. The "hypertensive" group, on the other hand, usually had a normal EEG, or the abnormalities were symmetrical; infrequent dysphasia in lesions of the dominant hemisphere; and a high degree of recovery, suggesting that the lesion was small and deeply situated in the brain. Angiography demonstrated a high incidence of stenotic or occlusive lesions of the intracranial and extracranial arteries in the "normotensive" group, and almost a complete absence of these findings in the "hypertensive" group.

The British physicians emphasize that it is often difficult to be certain of the pathologic cause of a stroke. However, in those patients in the "normotensive" group who came to autopsy, all had massive infarcts of the hemispheres. In the "hypertensive" group, two patients had intracerebral hemorrhages improperly thought to have been infarcts. Four patients in that group had small cystic softenings in the region of the internal capsule. The authors postulate that those small cystic areas are due to thrombosis of miliary aneurysms, the thromboses apparently extending to involve the small parent vessel and causing ischemic softening in the distribution of the vessel.

The authors acknowledge that the implications of recognizing these two distinct groups are not clear, as far as therapy is concerned. However, before any contribution can be made to the amelioration of this frequent and increasing affliction, there must be a sound understanding of its pathogenesis and a greater ability to diagnose it accurately.

At the close of life the
question will be not how
much you have got, but how much
you have given; not how much
you have won, but how much you
have done; not how much you
have saved, but how much you
have sacrificed; how much have
you loved and served, not how much
you were honored.

—Nathan C. Schaeffer,
from LEAVES OF GOLD

Smoking and High Death Rates Linked

Among 250,000 U. S. veterans observed for more than eight years of a 10-year study by U.S.P.H.S., smokers continued to have a higher death rate than non-smokers. In the same age group, 11 times as many cigarette smokers as non-smokers died of lung cancer, and 12 times as many died of emphysema. Three or more times as many died of cancer of the mouth, pharynx, esophagus or larynx, and from such diseases as bronchitis, asthma, stomach ulcer, duodenal ulcer and non-syphilitic aneurysm of the aorta. The mortality risk was shown to be related to the amount smoked for each form of tobacco use.

The veterans studied are policyholders of U. S. Government Life Insurance. Results to date from the study begun in 1954 are reported in a monograph EPIDEMIOLOGICAL STUDIES OF CANCER AND OTHER CHRONIC DISEASES, recently published by the National Cancer Institute.

President's Page

At intervals between May 24 and June 30, Iowa Blue Shield and the Iowa Medical Society are to hold Medicare meetings for physicians and physicians' secretaries in 17 locations throughout the state. They will constitute one of the first steps in the Society's cooperation with Blue Shield, the carrier for Part B, in the physician-relations and public-relations activities essential to the proper functioning of the new program.

A list of the dates and places for these meetings can be found on the "green sheet" in this issue of the JOURNAL, together with a map indicating the counties for which each meeting is chiefly intended. If the date for the session in your district is inconvenient for you, please feel free to attend one of the others, but please make sure that you and your key office personnel attend one of them.

At these meetings, physicians and the people who will have to do most of the "paper work" for them can learn the administrative details of Medicare Part B, for by that time the administrative details will have been definitely decided upon.

D. P. Leinbach

President

THE JOURNAL *Book Shelf*

BOOKS RECEIVED

MODERN TREATMENT, Vol. 3, No. 2, TREATMENT OF NEUROMUSCULAR DISORDERS, edited by *Frank M. Howard, Jr.*, M.D., TREATMENT OF HYPOGLYCOMIA, edited by *Buris R. Boshell*, M.D. (New York, Hoeber Medical Division, 1966, $16.00 per year).

CARING FOR THE AGED, by *Bertram B. Moss*, M.D. (Garden City, Doubleday & Company, 1966, $4.95).

BOOK REVIEWS

DEATH AND DYING: ATTITUDES OF PATIENT AND DOCTOR, Vol. V, Symposium No. 11, Group for the Advancement of Psychiatry, October, 1965.

In the introduction to this symposium we are reminded that for the most part, we now appear to die directly or indirectly by our own hands, by the hand of a fellow man, or as the result of an obscure process called senescence. Suicide rates vary according to countries and cultures, and are related to seasonal factors. Accident rates tend to reflect physical, mental, cultural, and possibly psychodynamic differences. Many of the present causes of death can be controlled, but cardiovascular disease and its complications and malignancy are notable exceptions.

In a study of patients with severe cardiac illness it was discovered that many such people demonstrate severe depressive symptoms. These patients are often aware of the fact that they are in danger of dying, yet cannot express their fear to others or to themselves. If the physician refuses to discuss the seriousness of the illness with the patient, he may reinforce the patient's feelings of helplessness. The patient may feel that he is not really understood and accepted. The physician needs to maintain a supportive relationship, and needs to encourage the patient to verbalize his feelings of hopelessness and helplessness and thus to withstand the threat to his life without undue amounts of depression.

In cases of advanced malignancy, there seems to be more fear of progressive isolation or "aloneness," than fear of death. Patients approaching death want an opportunity to maintain communication about daily things. As Leon Saul has stated, "I don't have any idea how we help a person to die, but I am sure we can do much to help a person to *live* until the time of death." Patients are oriented toward reality, and we must listen to them and accept their feelings and ideas as they are revealed to us.

In the second section of this report, a review is given of a study of the function of attitudes toward death. It is quite normal to deny the reality of death, yet physicians seemed to think less of death and to be more afraid of death than were two control groups of patients and nonprofessionals. In almost all of the major approaches to understanding personality, there is slight attention to death.

Usually, physicians' attitudes toward death and the dying reflect general social attitudes. In treating the dying or critically ill, all professional workers must deal with their own fears as well as with those of their patients. Man wants to live as long as possible, and when death is inevitable, he wants it to come easily, after a life that he regards as having been complete. One of the greatest challenges to the physician is to help the patient die comfortably when knowledge and skill cannot sustain or prolong life and when death has become unavoidable.

Awareness of dying may often be psychologically helpful, rather than harmful, if it is a part of constructive efforts to prevent death or to deal with its problems. The consensus of the well organized symposium was that honesty, complete understanding, and open channels of communication are vitally needed by both patient and physician as they face the inevitability of death.—*Russell C. Striffler.*

CURRENT PEDIATRIC THERAPY 1966-1967, by *Sydney S. Gellis*, M.D., and *Benjamin M. Kagan*, M.D. (Philadelphia, W. B. Saunders Company, 1966, $17.50).

Thirty years ago the drugs valuable for their specific therapeutic effects on diseases could have been described quite adequately in a 40- to 50-page textbook. Today a bewildering and confusing array of remedies flood the market, and the physician is bombarded in his daily mail by descriptions of not one but many drugs competing with one another for the treatment of the same disorder. How is he to make a judicious selection?

One good way is to consult what the experts in their particular fields have had to say. Drs. Gellis and Kagan have provided such a source of information in their 1966-67 issue of CURRENT PEDIATRIC THERAPY. They enlisted the aid of some 287 authorities, each of whom contributed a discussion of a particular disease process, or of a group of related disease processes, with special emphasis on the indicated therapy.

This 956-page book is divided into 25 sections, the section on infectious diseases being the most extensive. One misses illustrative photographs, but the verbal descriptions are for the most part quite adequate.

Any physician who is concerned with therapy of childhood disorders will find this a most useful, complete and reliable reference source.—*Lee Forrest Hill,* M.D.

(Additional Book Review on page 506)

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10,384	1964	88.5%

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Indications: The bacterial spectrum includes: streptococci, staphylocci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **Contraindications and Precautions:** TAO (triacetyloleandomycin) is not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents, of course, should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. It is contraindicated in pre-existing liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. **References:** 1. Isenberg, Henry D.: Health Laboratory Science **2**:163-173 (July) 1965. 2. Fowler, J. Ralph et al: Clinical Medicine **70**:547 (Mar.) 1963. 3. Isenberg, Henry D.: Health Laboratory Science **1**:185-256 (July-Aug.) 1964.

THE DOCTOR'S BUSINESS

Your Health and Accident Insurance Program

HOWARD D. BAKER
Waterloo

We are often confronted with the question of "How much health and accident insurance should I carry?" In considering this question, it is important that we remember that health and accident insurance is *disaster income,* and that it is neither necessary nor prudent for a man to carry insurance equal to his earned income.

What is necessary is that you have adequate income to insure the basic necessities for yourself and your family, and that you be able to meet all of the fixed obligations to which you are committed. It is much more important to have indemnity for a long enough period than to have a possibly excessive amount. Health and accident insurance should be based on need, and should not be carried in excess of need, or in the absence of need.

After considerable study of the problem, we have adopted the following basic principles regarding health and accident programs:

(1) *Amount of Coverage:* Monthly coverage should be a minimum of $400 per month, plus $50 per month for each dependent including the wife, and also plus the insured's total fixed monthly financial commitments. For example, if a doctor has a wife, three children and mortgage payments of $150 per month, he should carry at least $750 monthly protection. In making this computation, he should make an adjustment for income from outside sources.

(2) *Types of Contracts:* It is our recommendation that at least 50 per cent of the coverage consist of high-quality, permanent, individual policies with reputable companies. Needless to say, these should be non-cancellable and guaranteed renewable to age 65. These characteristics will guarantee permanence of at least one-half of the program.

After that portion has been secured, the remaining 50 per cent should consist of high-grade group contracts. These are semi-permanent, but are dependent upon continuation of the group and on the insured's continued membership in that group. As a supplement to permanent insurance, these contracts offer excellent coverage at very reasonable cost. Most state medical societies and specialty groups offer these quality group contracts today.

(3) *Indemnity Periods:* Since we believe in long-term catastrophic coverage as opposed to short-term protection, and since most doctors have cash and accounts to carry them for 30 to 90 days, at least, we recommend the following indemnity and elimination periods.

(a) *Sickness:* Indemnity should start on the thirty-first or sixty-first day, and should be payable for a maximum period of seven to ten years.

(b) *Accident:* Indemnity should start with the first day of disability, and should be payable for life. Since most good policies pay from the first day, no elimination period should be accepted.

Health and accident insurance is a highly speculative field and there are many bad contracts being written today, as well as many good ones. It should be borne in mind that, as with most other goods or services, one gets what he pays for. The day you become disabled, it will be too late to discover that the apparently "cheap" policy that you purchased is virtually worthless. With the aid of your insurance advisor, you should carefully evaluate your needs and each contract's provisions before you buy.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was a agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

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Iowa Association of Medical Assistants

Typing Tips

Some of our recent reading included an article on special typing problems and how to handle them. The old adage, "You are never too old to learn," is certainly true; these suggestions were not included in the typing instruction we received many years ago, and we have not observed their use in other offices. Perhaps they are included in present-day secretarial training, but we pass them along in an effort to share some new helpful hints.

Poorly corrected errors can spoil the looks of an otherwise well-typed page. Two erasers do a better job than one. First, move the carriage as far to the side as possible, so that the eraser shreds won't fall into the mechanism. Before erasing, place a steel or celluloid eraser guard between the carbon paper and second sheet; then with a soft eraser remove the surface ink from the original sheet; use the hard eraser to remove the imbedded ink; and follow with the soft eraser to smooth the paper. Be careful not to use too much pressure, or a hole will appear in the paper. Do not use pieces of paper under the carbon sheet when correcting errors—they are not heavy enough to protect the copies from eraser smudging.

Typing on carbon copies is usually fainter than on the original sheet, but corrections are more easily made on them. If more than one carbon copy is to be corrected, use the eraser guard between each carbon sheet and the following sheet of copy paper, and use only a soft eraser to remove the error. When all copies have been erased, change the ribbon control to stencil position, type in the correction, and then switch back to normal ribbon position and again strike the correct key. This will achieve equal density of color on the original and the carbon copies.

To erase near the bottom of a page, turn the sheet of paper back until the bottom of the sheet is free of the platen, erase and turn back to typing position. If the error is on material that has already been bound, corrections can be made if the pages are fastened at the top. Insert a blank sheet of paper in the machine and roll it about an inch above the platen, insert the page to be corrected between this sheet and the platen; and turn back into the machine until the sheet to be corrected is in the proper position for the correction. Pages that are bound at the side cannot be corrected unless one unstaples them.

Instead of guessing at how many spaces to use with punctuation, follow these simple rules:

One space:

After a comma or semicolon
After a period when it follows an initial or abbreviation
After an exclamation mark used in the body of a sentence
Before and after an "x" when it stands for "by," *e.g.,* a 3″ x 5″ file card.

Two spaces:

After a colon
After every sentence
After a letter or figure at the beginning of a line in a list of items.

No spaces:

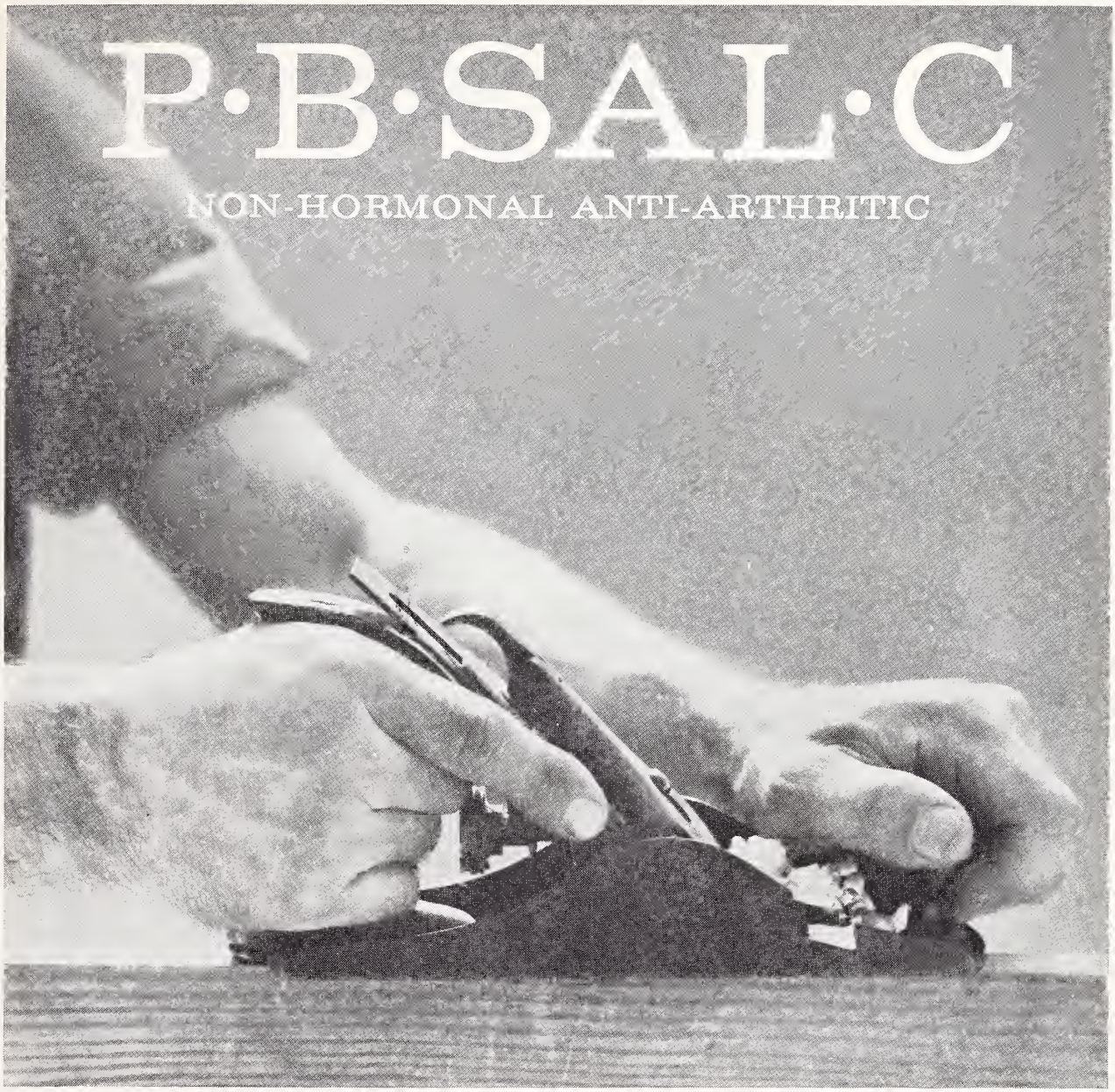
Before or after a dash (which consists of two hyphens)
Before or after a hyphen
Between quotation marks and the matter enclosed
Between parenthesis and the matter enclosed
Between any word and the punctuation following it
Between initials that make up a single abbreviation, *e.g.,* C.O.D.
Before or after an apostrophe, unless it begins or ends a word.

And, never separate punctuation from the word it follows. A good example of a very bad practice would be to place a hyphen and the remainder of the word being separated at the beginning of a line.

Buying a cheap typewriter ribbon is poor economy. Typed materials smudge easily because cheap ribbons are too heavily inked, because the metal type fills up with the ink and requires more frequent cleaning, and because the ribbon dries out more quickly than a better grade of ribbon. Nylon ribbons are more costly, but they last longer and give a clearer and neater type than cotton ribbons; paper carbon ribbons such as are used on some electric typewriters are the easiest to erase and need only a soft eraser. Choose the ribbon with the ideal amount of inking for the style of typeface you use.

Unless you are a qualified typewriter mechanic, leave repairs to a repair man. The best you can do

(Continued on page 506)



Helps keep arthritic patients active

P-B-SAL-C is a dependable, effective salicylate formula for relief of pain due to rheumatoid arthritis, bursitis and fibrositis.

Its formula consists of a combination of sodium salicylate, para-aminobenzoic acid and ascorbic acid. This special combination provides higher, longer-lasting analgesic levels compared with salicylates alone. Each P-B-SAL-C Tablet is enteric coated to delay disintegration until it reaches the small intestine.

P-B-SAL-C, low in cost to your arthritic patients, will help keep them active. Other P-B-SAL-C formulas available:

1. P-B-SAL-C with Colchicine
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For complete information and samples, write to Dept. IM-100

FORMULA
Each enteric-coated P-B-SAL-C Tablet contains sodium salicylate 0.3 Gm., para-aminobenzoic acid 0.3 Gm., ascorbic acid 50.0 mg.

CONTRAINDICATIONS
Renal damage, salicylate sensitivity or in conjunction with sulfonamide therapy.

DOSAGE
Take 2 tablets four or more times daily.

ULMER

THE ULMER PHARMACAL COMPANY
1400 Harmon Place
Minneapolis, Minnesota 55403

Iowa Member Named to Board of Directors of AAGP

Dr. Elmer M. Smith, of Des Moines, was named by the Board of Directors of the American Academy of General Practice to serve as a Board member for the remaining 18 months of the term of Doctor Lloyd Southwick, who passed away in January, 1966. Dr. Smith will serve on the Board until September, 1967. He was also appointed chairman of the Commission on Legislation and Public Policy.

Dr. Smith has served as a delegate from the Iowa Chapter to the AAGP Congress of Delegates. He is currently a delegate to the AMA House and a member of the government's Special Technical Advisory Committee on Provider Participation to the Social Security Administration. The Iowa Chapter is very proud of the honor bestowed upon it in having Doctor Smith appointed to the Board of Directors.

DATES TO REMEMBER

Spring Postgraduate Conference
New Inn Okoboji, Iowa
June 16, 17, 18, 1966

18th Annual Meeting and Scientific Assembly
Hotel Savery Des Moines, Iowa
September 18, 19, 1966

Iowa Association of Medical Assistants

(Continued from page 504)

for your machine is to keep it free from dust by covering it when not in use; oil only the carriage rail, and use 3-in-1 oil that will not gum; erase away from the mechanism; clean the type with type-cleaning fluid and a good brush, and don't forget to wipe off the platen occasionally; and wipe the whole machine once in a while with a dampened cloth.

In typing a number of envelopes, insert the first envelope flap-first into the machine; when it is about half way into the machine, start the flap of the second envelope and continue in the same way with each succeeding envelope. When typing small cards, feed them into the machine from the front of the platen, and roll them backwards to the proper line for typing, and feed each succeeding card between the preceding card and the platen by continuing to roll in reverse. The bottom of the card is then held snugly in position and the cards automatically come out against the paper table at the back of the machine. Do not start the second card until the typing is completed on the first card.

If several carbon copies are to be made, and it is important that perfect alignment be obtained, ask your stationer for a flexible backing sheet.

We hope you find these suggestions helpful. We did.

—Helen G. Hughes

Books Reviews

(Continued from page 500)

The Twenty-Minute Hour: A Guide to Brief Psychotherapy for the Physician, by *Pietro Castelnuovo-Tedesco*, M.D. (Boston, Little, Brown & Co., 1965, $5.95).

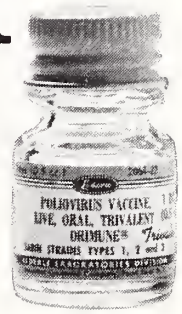
This book review is submitted by the reviewer with the hope that it will stimulate other Iowa physicians to read THE TWENTY-MINUTE HOUR. A review was not requested by the publisher, and to our knowledge no copy was submitted by the publisher for review in this JOURNAL.

This 184-page book is a concise, well written guide for the conduct of psychotherapy by the physician who is not a psychiatrist. In understandable language and virtually without any psychiatric and psychological jargon, it discusses the physician's attitude toward and relationship with the patient who is in need of *brief* psychotherapy. The physician entering into such a course of therapy is advised that he needs a therapeutic goal as well as a terminating point, at which time he must stop the interviews or refer the patient to a psychiatrist. The author guides non-psychiatric physicians in selecting patients for psychotherapy. There is an excellent chapter which discusses the relationship of the physician with the patient's family. The use of drugs is discussed in a general manner, without mention of specific therapeutic agents.

This book is not the answer for the physician who will not or cannot accept the emotional causes and complications of disease. There is *no* answer for such a physician. For the physician who is perplexed about what to do with the patient who has an emotional disorder when there is no psychiatrist available, or when the patient will not accept a referral to a psychiatrist, this book will be a great help.

Psychotherapy by the non-psychiatrist can be more than simple reassurance. Treating certain emotional diseases by a brief, integrated program of psychotherapy can be most beneficial to the patient and intellectually stimulating to the physician.—*James E. Kelsey*, M.D.

single-dose vials for convenient and economical polio immunization



ORIMUNE® TRIVALENT
POLIOVIRUS VACCINE, LIVE, ORAL SABIN STRAINS TYPES 1,2 and 3

Fast, simple administration—and economy for the patient—make the new 0.5 cc single-dose vial of ORIMUNE Trivalent ideal for private practice. (Packaged 5 to a box with 5 sterilized disposable droppers for your convenience.)
(Also available in 2 cc and 2 drop dosage forms.)

Only 2 doses required for complete, initial immunization for patients more than a year old.

Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic *side effects* have been reported. There are, however, certain *contraindications*. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.

In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.

Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months.) Booster immunization: one dose, given orally. See package literature for full directions.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
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PENTID®-SULFAS FOR SYRUP

SQUIBB BUFFERED PENICILLIN POWDER WITH SULFADIAZINE, SULFAMETHAZINE, AND SULFAMERAZINE

the fruit punch that packs a wallop

Pentid-Sulfas for Syrup is a real knock-out when it comes to good taste. And, with a single prescription, you provide an anti-infective that combats both gram-positive and gram-negative bacteria. Notable for its economy, Pentid-Sulfas for Syrup is everybody's choice, patient, parent and physician.

Contraindications: Contraindicated in patients sensitive to sulfa or penicillin, pregnant females at term, premature infants, newborns during first week of life. **Precautions:** Watch for hypersensitivity reactions and overgrowth of nonsusceptible organisms. Observe usual precautions for sulfonamide therapy: adequate fluid intake; force fluids if urine volume is low; maintain urinary pH of 7 or higher; use only after critical appraisal in patients with liver or renal damage, urinary obstruction, blood dyscrasias. **Adverse Reactions:** Anaphylactoid shock (rare), G.I. disturbances, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, urticaria, purpura, hematuria, crystalluria, conjunctival and scleral varicula, petechiae may occur. **Dosage:** Daily pediatric dosage should supply 65-100 mg. trisulfapyrimidines per pound body weight in divided doses q. 4 to 6 h. **Supply:** Pentid-Sulfas for Syrup when prepared, provides 80 cc. (16 doses) or 150 cc. (30 doses) of fruit-flavored syrup providing in each 5 cc. teaspoonful 125 mg. (200,000 u.) potassium penicillin G and 167 mg. each of sulfadiazine, sulfamethazine, and sulfamerazine.

Now . . . **NEW PENTID® '400'—SULFAS FOR SYRUP** (buffered penicillin powder with sulfadiazine, sulfamethazine, and sulfamerazine each 5 cc. providing 250 mg. [400,000 units] potassium penicillin G and 167 mg. each of sulfadiazine, sulfamethazine, and sulfamerazine). Available in 16-dose (80 cc.) and 30-dose (150 cc.) bottles.

For full information, see Product Brief.

SQUIBB Squibb Quality—the Priceless Ingredient

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Free Measles Vaccine for Physicians

Through educational measures, the State Department of Health has promoted measles immunization during the three-year period during which the vaccine has been available. However it was not until March of this year that funds from the U.S.P.H.S. enabled us to purchase the vaccine for distribution to doctors in Iowa.

The State Department of Health has received a supply of measles virus vaccine, live, attenuated. It is available to physicians, at no charge, for use in their private practices. There are no "strings" attached to the offer, other than that the Department asks them to make no charge to their patients *for the vaccine*. They may, of course, charge their regular fees for administering it and for any supplies that they expend.

The Department hopes that by making this vaccine available free to practicing physicians, it can enable the doctors to offer it at a reduced price to their patients, thus enticing more parents to take advantage of the protection the vaccine offers to their children. Doctors have estimated that of their patients who normally request all of the other "baby shots" for their children, only one-third have been requesting measles vaccine. Cost has been one obstacle; ignorance as to the seriousness of measles seems to be the other. A combination of cost reduction and widespread reeducation of the general public should produce the desired result, reducing the morbidity from measles to more reasonable proportions.

This is a "live virus" vaccine, and therefore some reactions (mild cases of uncommunicable measles) can be expected. The reaction rate can be reduced considerably by means of coadministering measles immune serum globulin at a different site. Because of the manner in which the gamma globulin is packaged (10 cc. vials), doctors are requested to order measles vaccine in a 25-dose lot or a multiple thereof. However those who wish to supply their own gamma globulin or to administer the vaccine without it may order as few as five doses at a time.

In the near future the Department will supply order blanks that will simplify the ordering of this vaccine. For the present, a note on a prescription blank will suffice, provided that it indicates the number of doses desired, and when and where to send them.

Note: Physicians in Polk County who want this vaccine should phone the Des Moines-Polk County Health Department, Communicable Disease Division, 283-2611 Ext. 238.

ABOUT THE VACCINE

During the winter, the U.S.P.H.S. asked all manufacturers of attenuated and further-attenuated measles vaccines to submit bids on 1,300,000 doses. The lowest bid was accepted. Thus the U.S.P.H.S. is making only one vaccine available through the funds allocated for measles immunizations.

Method of Manufacture. Measles Virus Vaccine, Live, Attenuated Phillips Roxane is prepared in tissue cultures of canine renal cells. The vaccine was derived from the "Edmondson" strain of virus originally isolated by Enders.* It has the following history: 24 human kidney cell culture passages; 28 human amnion cell culture passages; and 22 embryonated egg passages. The virus has been given an additional 15 passages in primary canine renal cell cultures.

The nutrient medium used to support the growth of the canine renal cell cultures and to propagate the vaccine virus is the isotonic aqueous solution of amino acids, vitamins, etc. commonly used in the preparation of vaccines, and is known as Medium 199. A low level of antibiotics is added to the tissue culture medium; each vaccine dose contains 33 mcg. of dihydrostreptomycin sulfate and 17 units of polymyxin B sulfate. The vaccine is freeze dried under high vacuum, and the ampule is flame sealed to prevent loss of potency due to absorption of moisture.

Dosage and Administration. A single dose of 0.5 cc. is injected subcutaneously into the upper arm, or subcutaneously or intramuscularly into the upper outer quadrant of the buttock. Because of the possible interference of maternal antibodies, the vaccine is not recommended for children under nine months of age. Greatest effectiveness can be anticipated in children at least 12 months of age. Each dose contains a minimum of 1,000 $TCID_{50}$'s

* Enders, J. F., and Peebles, T. C.: Propagation in tissue culture of cytopathic agents from patients with measles. PROC. SOC. EXPER. BIOL. & MED., 86:277-286, (June) 1954.

of measles virus vaccine as compared to the National Institute of Health measles virus reference standard. No antibiotic other than the ones named above is added or used in the manufacturing process.

At a different site, the administration of immune serum globulin (human), standardized for measles antibody content, or measles immune globulin, is recommended. It will further modify the fever and rash which occur with vaccine alone. A level of either 0.1 cc. per pound of body weight or 0.5 cc. total volume may be used.

Storage. Because of the well known thermal instability of measles virus, the vaccine should be stored at refrigerator temperatures (not above 4° C. or 39° F.). Freezing will not harm the potency of the vaccine, but exposure of vaccine to direct sunlight should be avoided. The sterile diluent may be stored in the package with the vaccine, or may be kept unrefrigerated.

Packaging Information. Measles Virus Vaccine, Live, Attenuated Phillips Roxane is supplied in a single package containing five individual single-dose ampules of freeze dried vaccine (Am-50) together with one multiple-dose vial of sterile diluent containing preservative—0.05 per cent methylparaben, 0.005 per cent propylparaben (Am-49).

Note. For further information, the manufacturer's information leaflet is included in each five-dose package.

AVAILABLE FROM THE STATE DEPARTMENT OF HEALTH

For venereal disease control
- Procaine penicillin (aqueous or oil suspension)
- Benzathine penicillin G (Bicillin)
- Achromycin (250 mg. capsules)

Immunizing agents
- Triple toxoid
- Diphtheria-tetanus toxoid (Combined, absorbed or precipitated—Adult type)
- Salk and Sabin poliomyelitis vaccines
- Typhoid vaccine triple (Typhoid, para A and para B)
- Smallpox vaccine
- Measles vaccine and accompanying gamma globulin

Rabies control materials
- Duck embryo anti-rabies vaccine
- Anti-rabies serum

Histoplasmin

Snake anti-venom (kept at poison center and sub-centers)

Gamma globulin (for protection of people exposed to measles, German measles, or infectious hepatitis, if the risk is sufficiently great)

For detailed information, telephone the Department.

Morbidity Report for Month of March, 1966

Diseases	1966 Mar.	1966 Feb.	1965 Mar.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	1099	750	562	Bremer, Johnson, Lyon, Marshall, Polk
Typhoid fever	2	0	0	Black Hawk, Lee
Smallpox	0	0	0	
Measles	1103	527	1277	Black Hawk, Bremer, Floyd, Muscatine
Whooping cough	5	8	1	Black Hawk
Brucellosis	4	0	5	Black Hawk, Madison, Muscatine
Chickenpox	1386	1105	743	Des Moines, Dubuque, Polk, Pottawattamie
Meningococcal meningitis	7	2	1	Des Moines
Mumps	936	349	637	Clayton, Jones, Muscatine, Pottawattamie, Warren
Poliomyelitis	0	0	0	
Infectious hepatitis	61	35	64	Black Hawk, Clinton, Des Moines, Dubuque, Montgomery
Rabies in animals	20	14	17	Allamakee, Hardin, Keokuk
Malaria	1	0	0	Marshall
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	25	10	24	For the state
Syphilis	88	57	49	For the state
Gonorrhea	239	217	205	For the state
Histoplasmosis	4	0	2	Floyd, Kossuth, Linn, Scott
Food intoxication	0	0	0	
Meningitis (type unspec.)	2	1	4	Black Hawk, Jefferson
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	13	0	7	Polk, Scott, Wapello
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	2	0	0	Hancock, Linn
H. influenzal meningitis	2	1	0	Mahaska, Polk
Amebiasis	0	0	2	
Shigellosis	6	0	200	Linn, Webster
Influenza	744	1	1202	For the state (Not lab. confirmed)

Evaluation of Permanent Impairment

The eighth guide in the series, "Guides to the Evaluation of Permanent Impairment" developed by the AMA Committee on Rating of Mental and Physical Impairment is now available. It is entitled: "Guides to the Evaluation of Permanent Impairment—The Respiratory System."

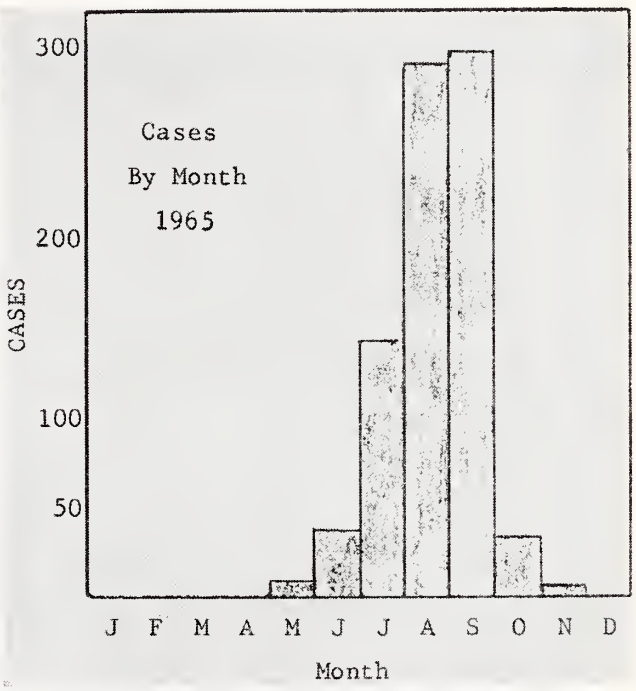
A limited number of copies of this guide may be obtained, without charge, upon written request to the AMA Committee on Rating of Mental and Physical Impairment, 535 North Dearborn Street, Chicago, Illinois 60610.

Encephalomyelitis in Horses

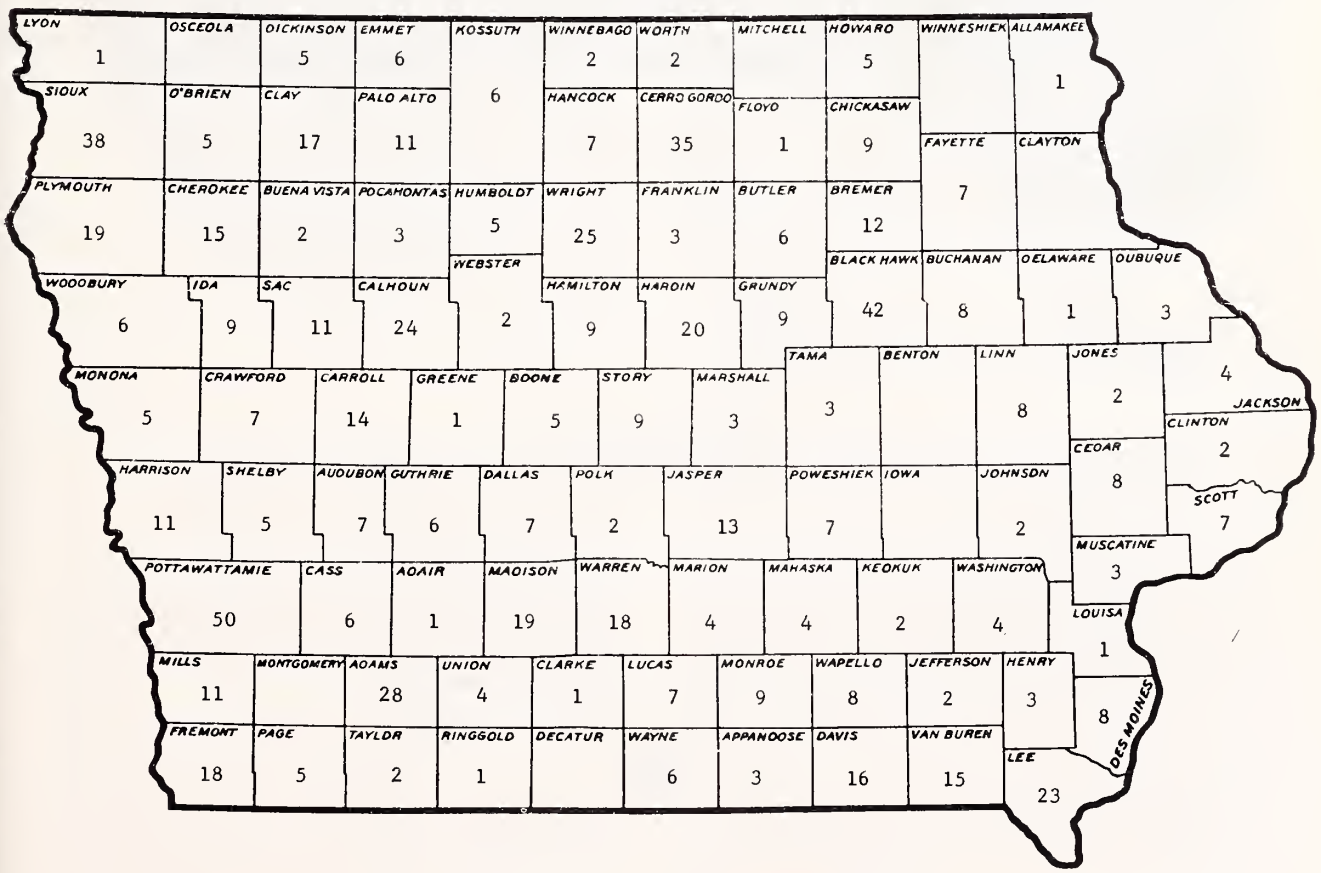
Practicing veterinarians in Iowa reported seeing 812 cases of clinical equine viral encephalomyelitis in the state during 1965. In 1964 and 1963 they saw 1,287 and 621 cases, respectively.

As indicated in the accompanying graph, about three-fourths of the cases occurred during August and September. The numbers of cases reported from each county are shown on the map.

Although this disease is not transmitted from horses to man, the numbers of cases in horses suggest that there is a high level of virus activity in nature each year in Iowa. Thus, there is a possibility of mosquitos carrying the virus from wild and domestic birds, which act as reservoir hosts, to man as well as to horses.



Encephalomyelitis in Horses, Iowa



Cases of Clinical Equine Viral Encephalomyelitis, 1965
Total = 812

incisive

A good way to describe 'Stelazine'. It's different from the tranquilizers that sedate and dull your anxious patients. Its antianxiety effect is direct. On 'Stelazine', your patients can be calmed yet remain alert.

And 'Stelazine' offers additional benefits. Dependence has not been reported. At low doses, side effects are minimal. Its b.i.d. dosage is convenient and economical.

Stelazine®

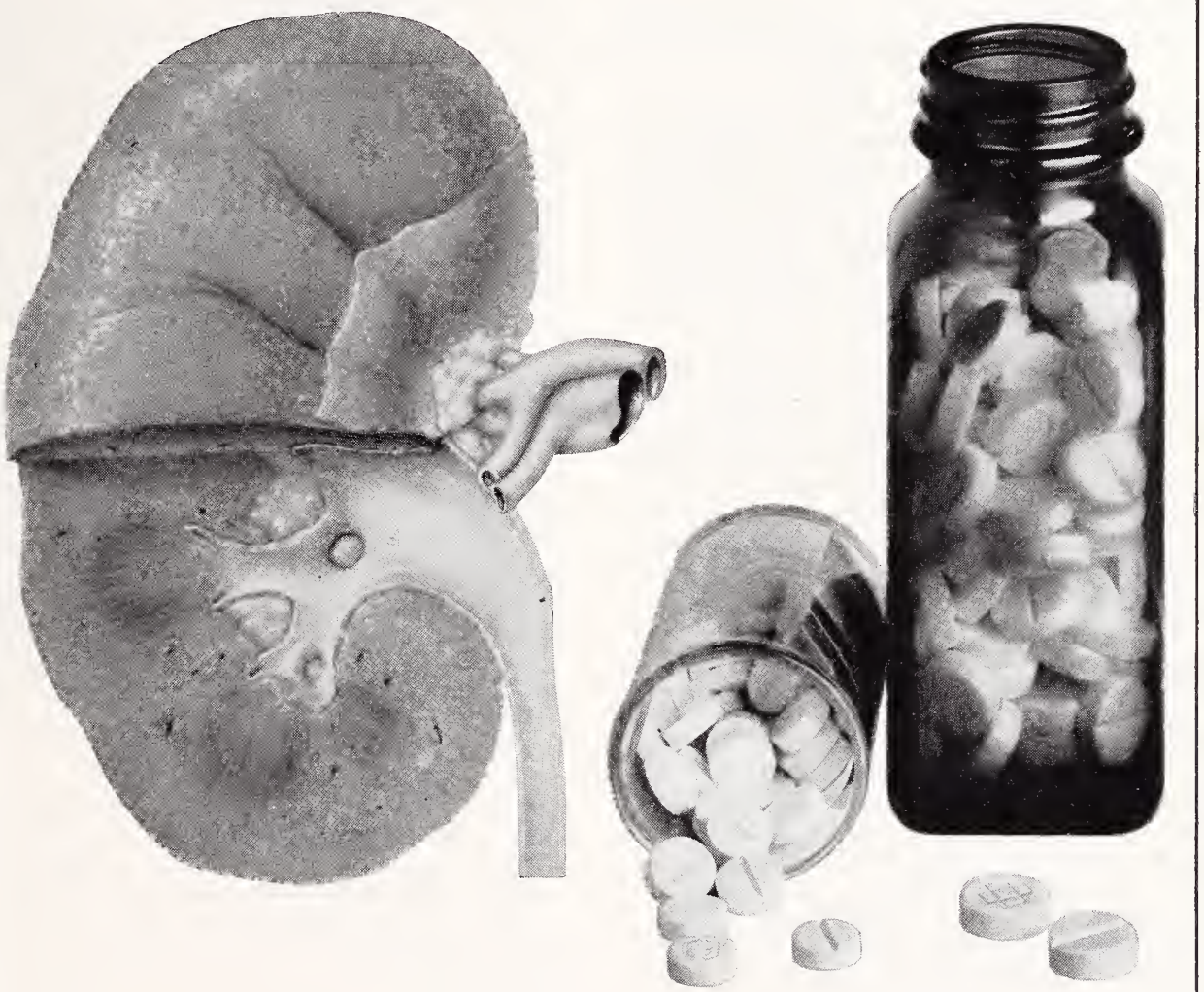
brand of **trifluoperazine**

Indications: Symptoms of excessive anxiety. *Contraindicated* in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories, Philadelphia

SK&F

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

Woman's Auxiliary News

Auxiliary Participation in Homebound Handcraft Projects

Iowa Homebound Handcraft's six fall sales were very successful. We hope they are an indication of continued growth of the Iowa Homebound Handcrafts program. The six sales are held in several locations in Iowa, and all but one are sponsored by the Woman's Auxiliary to the Iowa Medical Society. The sale held at the Cattle Congress in Waterloo, is conducted by Easter Seal volunteers.

In 1943, the Polk County Auxiliary organized and held a sale of craft items made by handicapped people in the Des Moines area. Encouraged by a successful sale, the Auxiliary worked with the handicapped in the area and made the sale an annual project. Interest in the Polk County Project grew throughout the State Auxiliary to the Iowa Medical Society, and other local groups started similar sales thereafter.

In 1948 the State Auxiliary to the Iowa Medical Society adopted it as a statewide service project, and encouraged sales to be held around the state. At that time the Auxiliary contacted the Iowa Easter Seal Society for help in locating handicapped Iowans who could benefit from the program, and co-operatively the Woman's Auxiliary and the Iowa Easter Seal Society built it. By 1960, six sales were being held. During the year of 1965, receipts reached a total of $5,586.74.

The efforts of the Fairfield Woman's Auxiliary paid off, with a $50.00 increase in its two-day sale. A high school poster contest put posters advertising the sale in many downtown store windows. And the ladies' phone campaign, reminding their friends of the sale, evidently was effective. The able chairman of the Fairfield Sale this year was Mrs. Ludwig Gittler. We certainly appreciate her efforts, and the efforts of all the other Auxiliary members who helped with the sale.

We are also grateful to Mrs. Eulalia Maly and Mrs. James Gould, co-chairmen of the Des Moines sale. They, too, spent countless hours in preparation for it. And we thank all of the members of the Polk County Auxiliary of the Woman's Auxiliary to the Iowa Medical Society for the time they spent working at the sale.

The Dubuque sale at Roshek's Department Store reached a total of $582.61. The chairman of the sale sponsored by the Woman's Auxiliary to the Dubuque County Medical Society was Mrs. Marg Rusk. Mrs. Rusk arranged for a radio interview on the Maud Grimm Show over station WDBQ in Dubuque. Mr. Fred Kelly, director of Iowa Homebound Handcrafts and Mrs. Roger Orvis, president of the Woman's Auxiliary to the Dubuque County Medical Society were interviewed by Maud on her show the day before the sale opened.

The Sioux City sale, which is annually held by the Sioux-Med-Dames, Siouxland's Woman's Auxiliary to the Woodbury County Medical Society, hit a total of $852.19. Mrs. Frederick Lohr was this year's chairman for the sale, held at Younker-Martins' Department Store.

Both Roshek's and Younker-Martins' were most accommodating. They even advertised the sales in the local newspapers. We feel this deserves a special THANKS for helping to make our sales in their stores so successful.

The Black Hawk County Medical Auxiliary held its annual sale at Black's Department Store again this year. Mrs. O. W. Hall, Jr., was chairman of the sale. The sale was extended to three days this year, and was held during regular store hours on March 10, 11, and 12.

Essay Contest

The topics again this year were "The Advantages of Private Medical Care" or "The Advantages of the American Free Enterprise System."

More counties submitted entries this year than previously, and we are glad to report that there was greater interest this year. The entries have been judged at the state level, and the award winners will be named in the June issue. The entries have been sent from the state to the national essay chairman for judging early in May.

The following is a letter received from Buchanan County describing procedures used for the contest there. We thought it might contain some helpful ideas for you.

1. The contest was started in October by the Medical Auxiliary. Committees were appointed by the President.

2. Judges were chosen by the Medical Society in January, and they judged the essays in the blind. They were the newspaper editor, a doctor and a lawyer.

3. Prizes of $25, $15, and $10 were given by the local Medical Society, and at a combined meeting

March 9 the Auxiliary gave a prize to the teacher of the first-prize-winning essayist.

4. The students received the bibliographies from the contest office library, plus help from their teachers. There was much competition this year from other organizations, and we felt fortunate in having nine essays submitted. Our early start accomplished this, I am sure.

5. The first three prize-winning essays were sent, March 8, to Mrs. Irving (Community Service chairman), and I hope they reached the proper place for judging before April 1.

Why Join the Auxiliary?

Perhaps this question should be asked. There may be some who feel that there can be only a materialistic answer. Well, whatever the reason, we should like to submit a few statements for the record.

We feel that anyone can join a club or a political party or a hospital auxiliary and work on its worthy projects, and many of us do; however the responsibility implicit in being a doctor's wife designates our Medical Auxiliary as a very special organization. Our personal lives are tied up with organized medicine to a great degree in the adverse currents of the day besetting medicine. As doctor's wives, we are fully aware that medical public relations are in our hands, and we cannot escape this fact even if we should desire to do so. We find that we speak the same language as other doctors' wives, and we have something in common with them in the interrupted, selfless way of life our husbands lead.

It is very altruistic to speak of merely meeting with the ladies of the Woman's Auxiliary and of all the benefits we can derive therefrom, but what are the facts? First of all, we are a real, working, public relations arm of our medical society, and we are proud to be depended upon as the Medical Auxiliary. Our Medical Society has set all our goals, and all of our activities are impelled in the direction of these goals. Our success in attaining these goals year after year can be ascribed only to the initiative, dedication and hard work of our individual members who find our county Auxiliary programs rewarding and meaningful to our communities, to our Medical Society and themselves.

All doctors' wives can be proud of the record of the Woman's Auxiliary. Their many unselfish activities have shown the state and national medical groups, as well as our own communities, that our women are an interested, concerned group, who will help the individual help himself. No individual doctor's wife could organize and implement such a program on her own, any more than she could do any of these other Auxiliary programs by herself. However, she can feel she is a part of each of them, if she contributes her time, talent, or dues.

There is an old saying, "With some people, you spend time; with others, you invest it." The Woman's Auxiliary stands on its record as a 24-karat, diamond-studded, blue-chip investment, and it especially sparkles in the light of appreciation from the State Medical Society, without which it would not even exist.

—Adapted from an article
in the January 1966 ARIZONA NEWS

News From Around the Hawkeye State

Black Hawk County

On Monday March 7, the money from the Mardi Gras Ball, sponsored by the Auxiliary, was distributed to the four hospitals. Each hospital received a check for $300.

At Sartori Hospital, in Cedar Falls, the money will be added to the building fund; at Allen Memorial Hospital it will be added to the nursing loan fund; at St. Francis Hospital it will be used for equipment for inhalation therapy; and at Schoitz Memorial Hospital it will be applied to the purchase of a thermosector to be used in eye, ear, nose and throat surgery.

Pottawattamie County

A salad luncheon, style show and card party was held March 17 at the Elks Country Club by members of the Pottawattamie County Medical Society Auxiliary.

Mrs. Emmett Mathiasen, president of the Auxiliary, announced that proceeds from the event went toward the purchase of a Mayo stand for the emergency room at Jennie Edmundson Hospital, and a laryngeal scope for the emergency room at Mercy Hospital.

Co-chairmen for the event were Mrs. Elmer Bean and Mrs. Lloyd Smith.

A feature of the luncheon, which began at 1:00 p.m., was a style show with fashions supplied by Joe Smith and Co., The John Beno Co., The Peoples Store, and Vergamini Fur Shop.

Mrs. F. M. Flammang narrated the fashion parade. The models were members of the Auxiliary. Card games followed the luncheon and program. Guests made up their own tables and played the games of their choice. The luncheon is an annual event.

Woodbury County

Three Sioux City women represented the Sioux Med-dames, the Auxiliary of the Woodbury County Medical Society, at the state convention of Iowa Medical Auxiliaries in Des Moines in April. They were Mrs. Carl Jacobs, Mrs. H. E. Rudersdorf and Mrs. Leonard Boggs.

The three were elected at a 10:00 a.m. Brunch Wednesday March 9 at the home of Mrs. Edward Honke.

Speakers at the meeting were James Pearce, as-

sociate director of the Council of Community Services; Mrs. George W. Madsen, chairman of the Siouxland Mental Health workshop, and Charles Vorwaller, psychiatric social service director for Woodbury County. They discussed "Comprehensive Mental Health Care in Woodbury County and the Role of the Volunteer Worker in the Program."

Worth County

The Worth County Medical Society entertained the members of the Medical Auxiliary at a 6:30 p.m. dinner, at Costa's, in Mason City, January 20, 1966. Following the dinner the Auxiliary conducted their annual regular business meeting. The meeting was called to order by the president, Sue Allison. Mrs. S. S. Westly, past-president of the State Medical Auxiliary, was our hostess and delegate to the annual meeting. Officers elected for the 1966-1968 period are as follows:

President—Mrs. Charles Bergen, Northwood
Vice-President—Mrs. William McAllister, Manly
Secretary and Treasurer—Mrs. Russell Olson, Northwood
Historian—Mrs. S. S. Westly, Manly
Legislation—Mrs. B. H. Osten, Northwood
Mental Health—Mrs. M. P. Allison, Northwood

Our society subscribes 100 per cent to the Health Careers Fund and the AMA-ERF. Our meeting closed with a most enjoyable evening with the husbands.

—MRS. CHARLES BERGEN, *President*

Hands

The body God fashioned for mankind has many wondrous parts—but hands rate high in the numerous duties they perform.

To the infant, the mother's efficient hands are security;
To the toddler, the hands teach many skills;
To the sick, hands give loving care.
To the housewife, hands are used as tools for cleaning, preparing food;
To the seamstress, the hands are invaluable;
To the business acquaintance or friend, the hand expresses good will in a "hand shake";
To the masseur they are used for relaxing;
To the deaf and dumb they "speak";
To the laborer, the rough hands are a means of a livelihood;
To the typist the hands are all important;
To the ballet dancer the hands show poise;
To the singer or dramatist the hands bring out deep expression;
To the lover, a clasped hand excites bliss;
To the artist, the hands portray their feelings through paintings;
To the sculptor hands are used to mold likenesses;
To the surgeon hands are "life-savers";
To the musician the hands bring forth sounds of beauty;
To the bereaved, another's hand squeeze tells "all" without words.

At different stages hands may be hot, cold, warm, cool, dry, moist, rough, soft, bony or plump. They can be readily distinguished as portraying many emotions—quiet hands show inner peace and calm; fidgety hands express nervousness; upraised hands, alarm; fists, anger; claws, meanness; patting, gentleness; wringing, anxiety; folded, praying.

God's gift of "hands" is truly a great one!

—ANONYMOUS

Editor's Note

When I was asked to take the job as NEWS editor for this year I was petrified. I knew very little about Auxiliary work, knew very few people and had never had any experience with this type of job.

I want to take this opportunity to say that it has really been a pleasure. I feel that I personally have profited in many ways from this experience. I have learned what is going on in our state. I have begun to know who is who in the medical family. But most of all, I have enjoyed being a member of the Board. I have been thrilled to find out what Auxiliary is really all about from the gals who are working so hard to make it what it is.

I want to thank each of you for your cooperation in getting the news to us, and for your many helpful ideas and suggestions.

I have been asked to continue as editor for a second year and I am delighted to accept.

I trust that you enjoy the AUXILIARY NEWS, and hope that you will feel free to make suggestions for its improvement.

Lynn Carlson (Mrs. Rodney) will again be co-editor and I know that she shares the above sentiments.

—MRS. J. F. VEVERKA

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Henry Boe, 3919 Orchard Street, Sioux City 51104
President-Elect—Mrs. R. E. Hines 3525 Witmer Parkway, Des Moines 50310
Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501
Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312
Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228
Co-Editor—Mrs. R. R. Carlson, 826 Sherman Drive, Ankeny 50021

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- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

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Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

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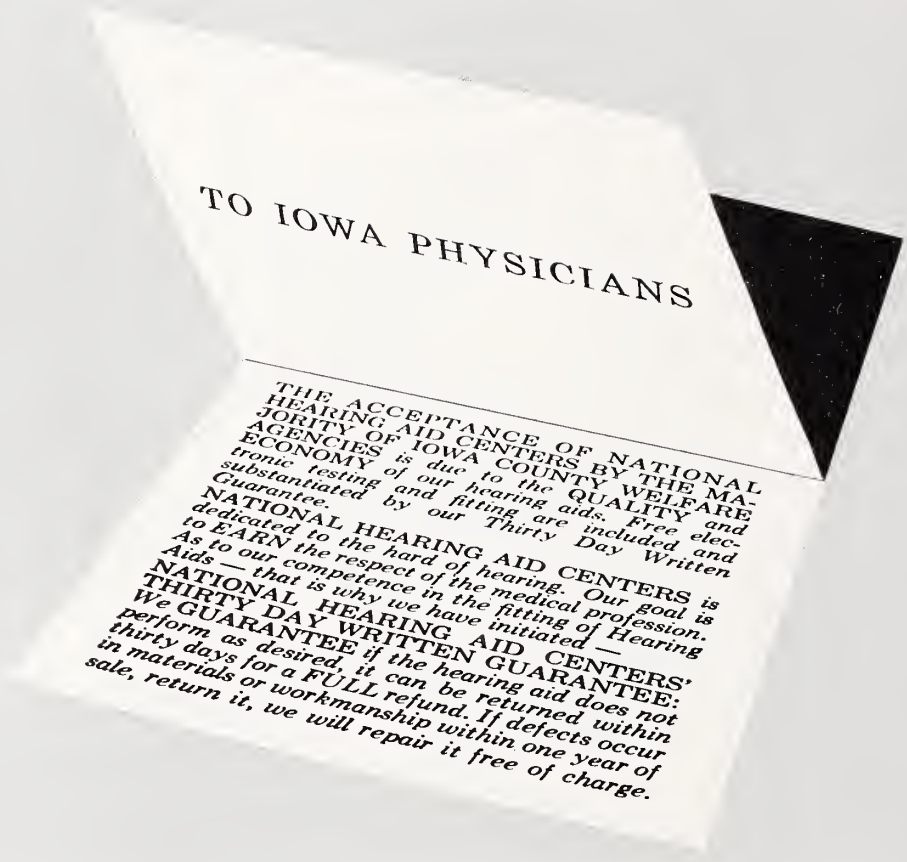

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Personals

Drs. Selig M. Korson, W. C. Brinegar and **Wayne B. Brown,** superintendents of the Mental Health Institutes at Independence, Cherokee and Mt. Pleasant, are listed, for the first time, in the 34th edition of WHO'S WHO IN AMERICA, which was published recently.

Dr. Dean M. Lierle, professor emeritus and former head of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, has been elected president of the American Advisory Board for Medical Specialties, a group which counsels with and coordinates the activities of the boards of the individual medical specialties. Three other U. of I. professors are members of the Advisory Board: **Dr. William K. Hamilton,** head of anesthesiology; **Dr. William C. Keettel,** head of obstetrics and gynecology; and **Dr. Rubin H. Flocks,** head of urology.

Five physicians discussed cancer at a meeting held in LaPorte City on March 25 under the sponsorship of the Black Hawk County Chapter of the American Cancer Society. **Dr. Karl Jauch,** of LaPorte City, spoke on lung cancer; **Dr. Richard D. Wells** discussed colon and prostrate cancer; **Dr. Don Woodard's** topic was uterine cancer and the Papanicolaou smear; and **Dr. G. M. Vandervelde** spoke on lymphoma. The latter four physicians practice in Waterloo.

One of the finalists in this year's Joseph P. Kennedy, Jr. Foundation International Awards is **Dr. Hans U. Zellweger,** a professor of pediatrics at the U. of I. College of Medicine. He has been cited for his research work, which is chiefly in genetics. The winners of cash prizes, which total about $225,000, were to be announced on April 11 in Boston.

Dr. Frederick J. Lohr, of Sioux City, spoke to the St. Joseph Home and School Association there, March 24, on "Guidelines for Parents in Giving Sex Instruction."

Dr. Willard Krehl, a research professor of internal medicine at the U. of I. College of Medicine, spoke on the role of nutrition in chronic diseases at a seminar in Kansas City, March 31 and April 1, conducted by the U.S.P.H.S.

Dr. Glendon D. Button, of Marshalltown, **Dr. John M. Wall,** of Boone, **Dr. Richard F. Wilker,** of Creston, and **Dr. Francis C. Conway,** of Emmetsburg, have become members of the American Academy of General Practice.

Dr. Frank Ober, president of the Iowa Medical Society, and **Mr. Ed Dailey,** president of the Iowa

a Private Psychiatric Center at Jacksonville, Illinois, *since 1901*

Complete psychiatric treatment in an environment for cure. A 50 bed hospital with the most modern diagnostic and therapeutic equipment for the treatment of nervous and mental disorders.

LICENSED: Illinois Department of Mental Health.
MEMBER: Illinois Medical Service (Blue Cross-Blue Shield).

State Bar Association, were the speakers at a meeting of the Notre Dame Home and School Association, in Burlington, on March 23.

Dr. John T. Bakody, of Des Moines, spoke on brain injuries sustained during games, at a meeting of team physicians and coaches in Carroll on March 26. **Dr. Joseph Gross,** of Omaha, spoke on neck injuries; **Dr. Bernard Kratochvil,** of Omaha, discussed knee injuries and demonstrated taping; and **Dr. Richard Crotty,** of Omaha, talked about the skin problems of athletes.

The first meeting of a seven-member committee formed to study plans for expanding the Cedar Rapids health department to serve the whole of Linn County was held on March 16. The physician members are **Dr. William Basler,** of Cedar Rapids; **Dr. Alfred Brendle,** of Central City; and **Dr. William Armstrong,** of Marion.

Dr. B. F. Kilgore was elected president of the Des Moines Health Center at the organization's annual meeting on March 22.

The Selective Service System has given **Dr. P. R. V. Hommel,** of Elkader, a 25-year certificate in recognition of his service on the local draft board there.

Drs. Warne Ramsey and **Alan Swearingen** are to build a clinic on a corner of a parcel of ground adjacent to and owned by the Asbury Methodist Church, in Bettendorf. When the property has been reduced to a desirable height through the removal of 40,000 cu. yds. of dirt (which is being used in building a levee to protect the J. I. Case Co. plant), the doctors will lease space for a 130 x 165 ft. building and will surface about 70 automobile parking spaces which their patients can use on weekdays and the church congregation can use on Sundays. First, permission must be sought from the zoning commission.

In a letter to the editor of the DES MOINES REGISTER, published on April 1, **Dr. Harold W. Morgan,** of Mason City, said, in part: "On the basis of my experience with blood and urine tests for intoxication in approximately 3,000 drunken-driving cases, I can agree with the Committee on Chemical Tests for Intoxication of the AMA. Approximately 50 per cent of those having a blood alcohol level of 50 mg. (.05 per cent) will be intoxicated within the meaning of the Iowa law. At 0.1

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Contraindications: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.

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per cent I have never seen an individual who I felt was competent to drive. The National Safety Council figure of .15 per cent is unrealistically high.

"An individual weighing 150 pounds must have asborbed 2½ ounces of absolute alcohol to reach 0.1 per cent. This means the absorption of alcohol from the stomach into the blood stream and its dissemination throughout the body. It would require a minimum of 5 ounces of 100 proof whisky or 6 ounces of 80 proof whisky to reach this level.

". . . I would favor lowering the generally accepted level to 0.1 per cent, and with supporting evidence accept .05 per cent as an indication of intoxication within the meaning of the Iowa law. . . ."

Dr. George H. Keeney, of Mallard, was given a party on his 86th birthday, March 22. He has served his community as a physician for 57 years, and for four terms he was state representative for Palo Alto County. In addition, he served 39 years on his local school board, and 30 years on the county school board. He was named IMS General Practitioner of the Year in 1960.

Dr. and Mrs. Clark R. Rominger, of Waukon, spent April in Honduras. Dr. Rominger served on the staff of a clinic in the mountains there.

Dr. W. D. Paul, head of physical medicine and rehabilitation at the U. of I. College of Medicine, addressed a PTA in Marion on March 28.

Dr. M. G. Parks, who recently took over the practice of **Dr. Richard Donahue,** in Centerville, has been named by the Appanoose County Board of Supervisors to serve out Dr. Donahue's term as county medical examiner.

At a meeting of the Montgomery County Farm Bureau, in Red Oak on March 15, the guest speaker was **Mr. Frank Woolley,** Chicago, a field representative of the American Medical Association.

Though he is 94, **Dr. E. L. Hollis,** of Marengo, is still practicing medicine. A feature story on him in the CEDAR RAPIDS GAZETTE for March 27 quoted him as saying, not altogether seriously, "In 1903 the average life expectancy was 39 years. Now it's clear up to 69. I've worked hard night and day."

Dr. Thomas L. Vineyard, a Life Member of the Iowa Medical Society, closed his office in Ottumwa on April 1, and retired. He is a 1908 medical graduate of the Atlanta Medical College, which subsequently became a part of Emory University, and he practiced in Georgia until 1933. He is a past-president of the American Proctological Association.

Announcement was made on March 27 that the AMA and the American Society of Clinical Pathologists had approved the school of cytotechnology at Allen Memorial Hospital, Waterloo. The school, which is directed by **Dr. Fred Dick,** can train two students each year. The prerequisites are two years of college training and 12 semester or 18 quarter hours of biology during those two years of college. The cytotechnology course consists of two six-month phases, one of them including demonstrations, preparation of materials and slides, and record keeping, and the other of practical experience in making use of the materials.

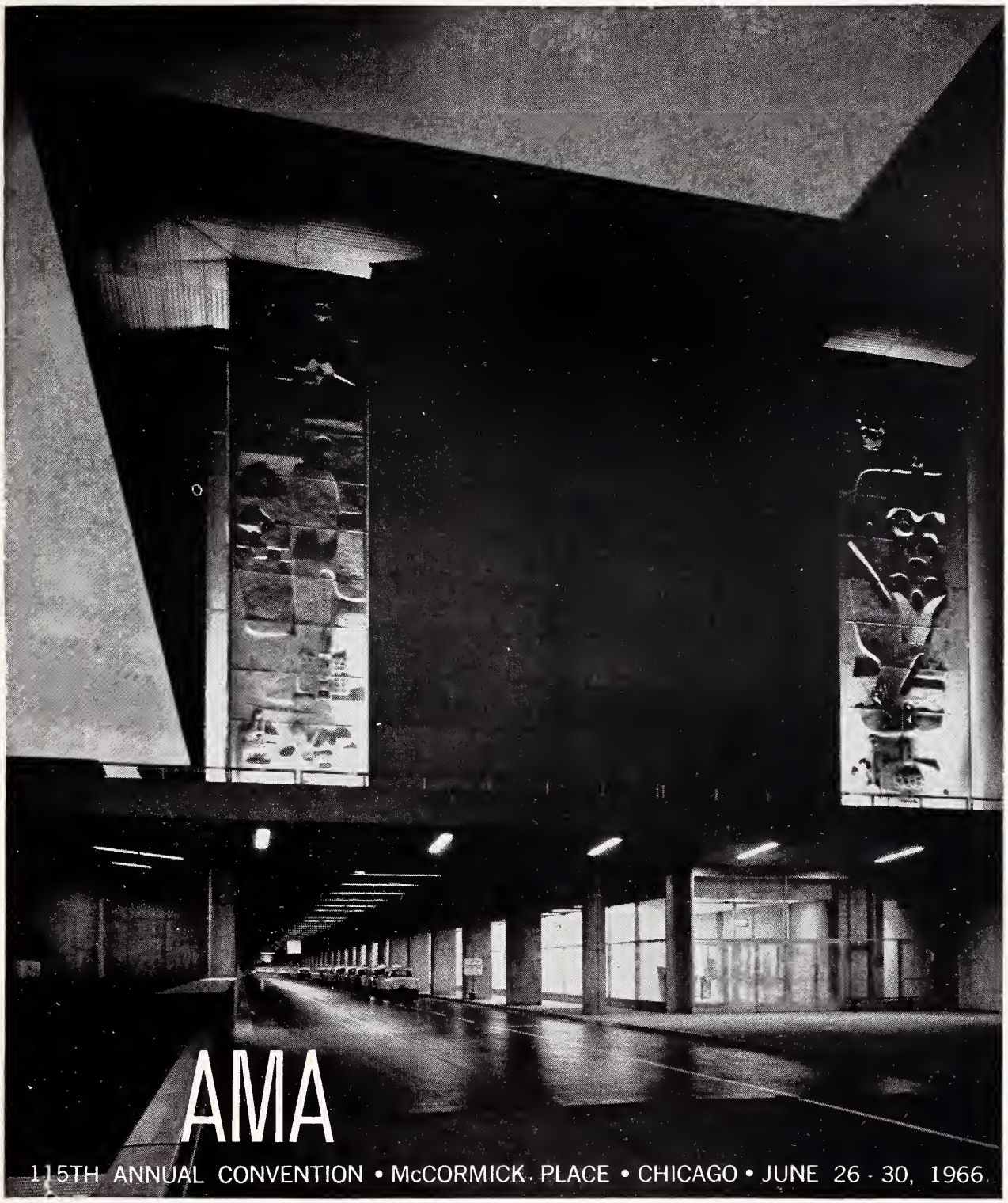
A $3.5 million modernization program for Finley Hospital, Dubuque, was announced on March 27 by the institution's board of trustees. It will include replacement of the 1890 building which is a part of the hospital, and the construction of a new 100-bed extended-care unit.

On March 12, **Mr. M. B. Weiner,** of Sioux City, president of the Iowa Nursing Home Association, announced that his organization had selected Mutual of Omaha Insurance Company as its fiscal agent or intermediary for the Medicare program.

THE CEDAR RAPIDS GAZETTE for March 13 contained a feature story on **Dr. P. R. V. Hommel,** of Elkader. As an eight-year-old boy, with his mother's permission, he left his home town in Puerto Rico with the American troops at the end of the Spanish American War. Captain Hommel, of Neillsville, Wisconsin, adopted him. Dr. Hommel returned to Puerto Rico once, in 1912, to visit his mother, and according to the newspaper he planned to make a second trip there last month, to visit some of his cousins. The initials P. R. V. stand for Placido Ramus Vasquez.

Dr. Dean E. Finken, formerly of Cedar Rapids, undertook full-time work as physician at the Men's Reformatory in Anamosa on April 1. For a month or more previously, he had spent half of each day there. **Dr. A. P. Randolph,** of Anamosa, served the institution part-time before Dr. Finken's arrival.

At a meeting of the Parents' Club of Kuemper High School, in Carroll on March 9, **J. M. Tierney, M.D., P. T. Cawley, M.D.,** and **N. J. Gradoville,**



CXV 1966

Chicago, the convention capital of the world, hosts the world's largest medical convention. Each year the AMA Annual Convention presents a wider and greater range of medical subjects. This year's convention will be held in magnificent McCormick Place. Air-conditioned, it offers almost unparalleled facilities. View and participate in the following: • Six general scientific meetings • 23 medical specialty programs • 800 scientific and industrial exhibits • Lectures, panel discussions, motion pictures and color television. Plan to attend—continue your post-graduate education.

See JAMA May 9 for complete scientific program—forms for advance registration and hotel accommodations.

AMA CXV 1966

AMA ANNUAL CONVENTION McCORMICK PLACE CHICAGO, ILLINOIS JUNE 26 - 30, 1966

There will be six (6) General Scientific Meetings at the Chicago Convention:

1. Population Expansion, 2. Emphysema, 3. Burns, 4. Mysterious Fevers, 5. Community Hospital and Coronary Care Units, 6. Headache

In addition, 23 Sections will present scientific programs and many of these will be Joint Meetings of one or more Sections, and in some instances, a Specialty Society.

- The American College of Chest Physicians will again join the AMA Section on Diseases of the Chest in an all day program.
- The American College of Cardiology and the American Heart Association will join the AMA Section on Internal Medicine in a half-day session.
- The American Congress of Physical Medicine and Rehabilitation and the Mid-America Society of Physical Medicine and Rehabilitation will meet jointly with the Section on Physical Medicine.
- The American Society of Clinical Pathologists will join the AMA Section on Pathology and Physiology in a half-day session on Computers in Medicine.
- The International Academy of Pathology will join the Section on Pathology and Physiology in a full day's program on Tropical Medicine.
- The AMA Committee on Blood and the Section on General Practice will present a half-day session.
- The Society for Investigative Dermatology, Inc. will hold its meetings in conjunction with the Section on Dermatology, and the Association for Research in Ophthalmology, Inc. in conjunction with the Section on Ophthalmology.
- The Sixth Multidiscipline Research Forum will be held under the auspices of the Section on Experimental Medicine and Therapeutics.
- Three Special Sessions—on Nursing, Maxillofacial Surgery and Nuclear Medicine—under the Section on Miscellaneous Topics.
- Medical Motion Pictures and Color Television will be presented daily. Some of the Sections will participate in the Television program.
- Approximately 350 scientific exhibits will be presented.

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Confirmations will be mailed up to June 22.

AMA | 1966 | CHICAGO

This form may also be used for meetings (June 23-26), prior to AMA Convention, but rooms must be released on date indicated.

If you are an industrial exhibitor, be sure to give name of firm and individuals to occupy room or rooms reserved. Please make all changes and cancellations through the Housing Bureau. Hotel reservations will be held only until 6 p.m. unless otherwise specified.

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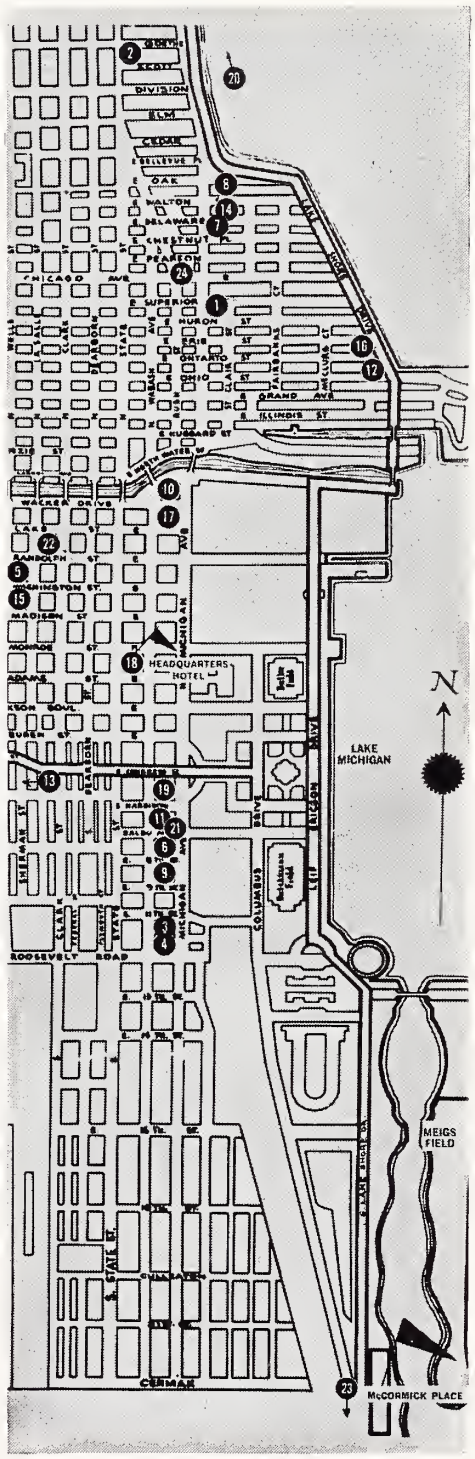
These rooms are available only through the AMA Housing Bureau.

	NAME	SINGLES	DOUBLES	TWINS	SUITES
1.	Allerton Hotel	10.00		14.00-15.00	
2.	Ambassador Hotels	14.00-18.00	15.00-32.00	18.00-32.50	30.00-47.00
3.	Ascot House	13.50-17.00		18.00-24.00	45.00-55.00
4.	Avenue Motel	13.50-15.00		18.00-22.00	45.00
5.	Bismarck Hotel	12.00-19.00	14.00-20.00	16.50-24.00	35.00-55.00
6.	Conrad Hilton Hotel	10.00-15.50	18.50-25.00	19.00-31.00	35.00-125.00
7.	Continental Plaza	22.00-25.00	30.00	27.00-29.00	
8.	Drake Hotel (Woman's Auxiliary Headquarters)				
9.	Essex Inn	14.00-18.00		18.00-24.00	50.00-75.00
10.	Executive House	16.00-21.00	20.00-25.00	20.00-25.00	37.50-47.50
11.	Harrison Hotel	9.00-12.00	12.50-17.00	14.00-17.00	
12.	Holiday Inn	12.50-15.50	15.00	18.50	
13.	Imperial Inn		26.00	24.00-26.00	35.00
14.	Knickerbocker Hotel	12.00-16.00		16.00-20.00	
15.	LaSalle Hotel	10.00-16.00	14.00-18.00	16.00-23.00	
16.	Lake Tower Inn	12.00-15.00	17.00-19.00	18.00-22.00	42.00
17.	Oxford House	18.00	22.00	22.00	35.00-65.00
18.	Palmer House (HEADQUARTERS HOTEL; LIMITED NUMBERS OF ROOMS AVAILABLE)	12.00-24.50	19.50-25.50	21.50-30.50	
19.	Pick-Congress Hotel	10.00-18.00	12.00-21.00	16.00-23.00	30.00-110.00
20.	Sands Motel	12.00	16.50		
21.	Sheraton-Blackstone Hotel	9.00-11.50	16.50-19.50	21.50	38.50-88.50
22.	Sherman House	8.00-15.00	14.00-20.00	15.00-22.00	30.00-70.00
23.	Shore Drive Motel	12.00-15.00	16.00-22.00	16.00-22.00	30.00-50.00
24.	Water Tower Inn	20.00-22.00	24.00-26.00	26.00-28.00	30.00-34.00



- If rate requested is not available, next highest will be assigned.
- Be sure and specify time of arrival as well as date.
- If you are an Industrial Exhibitor, please specify firm name and list of all occupants for all rooms reserved.
- Please make all changes and cancellations with the Housing Bureau.
- A three per cent (3%), Illinois Hotel Operators' Occupational Tax is applicable to all hotel rates.
- Reserve rooms as soon as possible. Assignments will be made in the order requests are received.
- Please **DO NOT** send your request directly to the hotel; it will only delay your confirmation.

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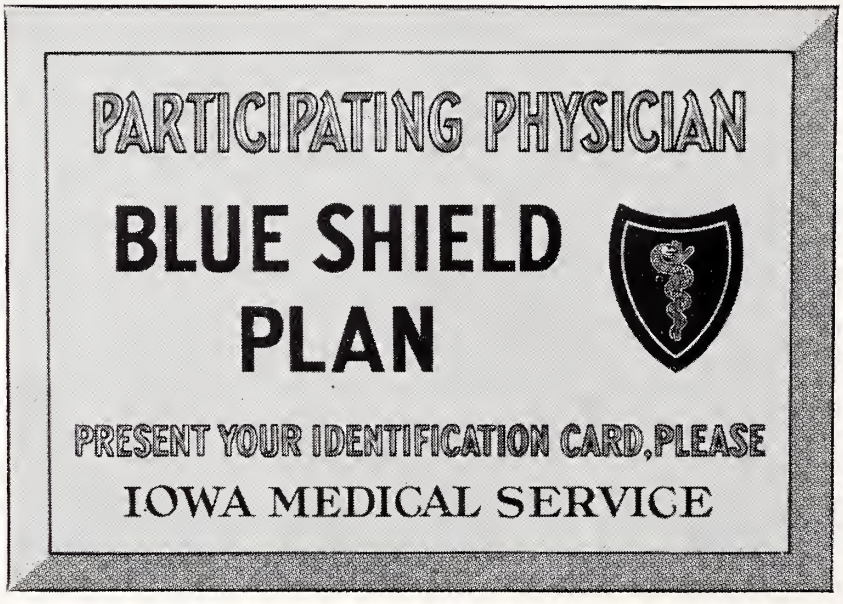

It says that you are doing a lot to meet an important socio-economic need, and you're doing it the best way . . . the voluntary way. There isn't much doubt that the number of charity patients you treat will dwindle as federal poverty programs and government health programs take effect. But you, through your participation in Blue Shield, will still be rendering an important service to a much broader segment of our population. Through the full service provisions of Blue Shield, you will be helping those to whom any charges above and beyond the listed benefits would be a serious hardship or even a crippling financial burden. And every time you do it, you are helping to keep this segment of the population from turning to the government for help.

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D.D.S., discussed the importance of good nutrition for teenagers.

Drs. J. T. Worrell and **Kiyoshi Furomoto,** of Keosauqua, supervised immunization clinics early in March at Keosauqua, Birmingham and Stockport. Van Buren County had one death and one non-fatal illness attributed to tetanus during the past year.

Dr. John G. Napier, of Cedar Falls, spoke on birth control at a meeting of the Black Hawk Association of Medical Assistants, in Waterloo on March 9.

Dr. David F. Shaw, who has practiced at Britt since 1931, was selected on March 14 to receive a citation from the American Legion post there, for outstanding service to the community. Among his activities have been work with the Boy Scouts and service on the school board and the Hancock County Conservation Board.

Two Iowa City physicians were on the program of the American College of Surgeons, in Cleveland March 14-17. **Dr. Brian F. McCabe,** head of the Department of Otolaryngology and Maxillofacial Surgery at the U. of I. College of Medicine, discussed vestibular testing, and **Dr. Clair M. Kos,** a private practitioner of otology, participated in a panel discussion of otologic surgery.

In Sioux City, early in March, **Drs. Frank D. McCarthy, James E. Reeder, Jr., Edward H. Sibley,** and **Donald J. Wagner,** and their wives, entertained eight medical students from Ecuador for four days. The students visited local health and welfare facilities and a farm. Their country has an agricultural-industrial economy resembling that of Midwestern United States.

Dr. E. W. Paulus, of Iowa City, has received a five-year certificate for service to the Johnson County draft board.

At the Phi Rho Sigma fraternity house, in Iowa City on March 7, **Dr. Frank G. Ober,** president of the Iowa Medical Society, spoke on "Responsibility of Physicians at the State Level."

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References: (1) Schoch, A. G.: Current News in Dermatology, August, 1963; (2) Jillson, O. F., and Baughman, R. D.: Arch. Dermat. 88:409, 1963; (3) Cole, H. N., et al.: J.A.M.A. 130: 1, 1946; (4) MacEachern, W. N., and Jillson, O. F.: Arch. Dermat. 89: 147, 1964.

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Dr. Robert C. Hardin, dean of the U. of I. College of Medicine, delivered the opening address at a meeting of representatives from 13 chapters of the Student American Medical Association, in Iowa City during the first weekend in March.

Dr. Ian Maclean Smith, of the Department of Internal Medicine at the University of Iowa, addressed the Linn County Medical Society on "Modern Concepts of Antibiotic Therapy," March 10 in Cedar Rapids.

Dr. Thomas Lopez, of Farmington, escaped injury in a one-car automobile accident in Donnellson, February 28, while he was on his way to perform surgery in Keosauqua. He said that his brakes grabbed as he approached an intersection, and as a result his car went out of control and hit a utility pole. His car was badly damaged.

A two-page color picture in a recent issue of LIFE showed a Vietnamese girl whose eye had been injured by shrapnel during an allied assault on a village filled with Viet Cong. The key figure in the accompanying story is **Capt. Bruce E. Spivey,** who was a member of the staff in ophthalmology at the U. of I. College of Medicine before his entry into military service in July, 1964. He did a cornea-transplant operation on the child, using a cornea provided by the Lions Club of Indianola and **Dr. A. E. Braley,** chief of ophthalmology at the U. of I.

Dr. Ivan Brown, of Hartley, spoke to a District 15 meeting of the Iowa Nurses' Association there, on February 28. His topic was the treatment of burns in disaster situations.

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Dr. Gerald Solomons, director of the Child Development Clinic at the U. of I. College of Medicine, was the keynote speaker at a two-day regional meeting for Special Education personnel, at the Tallcorn Motor Hotel in Marshalltown, March 4 and 5, under the auspices of the school systems in Marshall and Jasper Counties.

The Board of Trustees of Mary Greeley Hospital, Ames, has asked the City Council to consider expanding the institution from 90 to 125 beds, according to an expansion plan scheduled for completion in 1970. Services for physical therapy, psychiatry, rehabilitation, and chronic and intensive care would also be provided for. The report said that the medical-surgical census in 1965 was 77 per cent of capacity, and that expansion should be planned when occupancy of major units reaches 80 per cent, as it can be expected to do under Medicare.

Dr. R. D. Liechty, of the Department of Surgery at the U. of I. College of Medicine spoke about his experiences aboard the hospital ship *Hope* at the March 1 meeting of the Marshall County Medical Society.

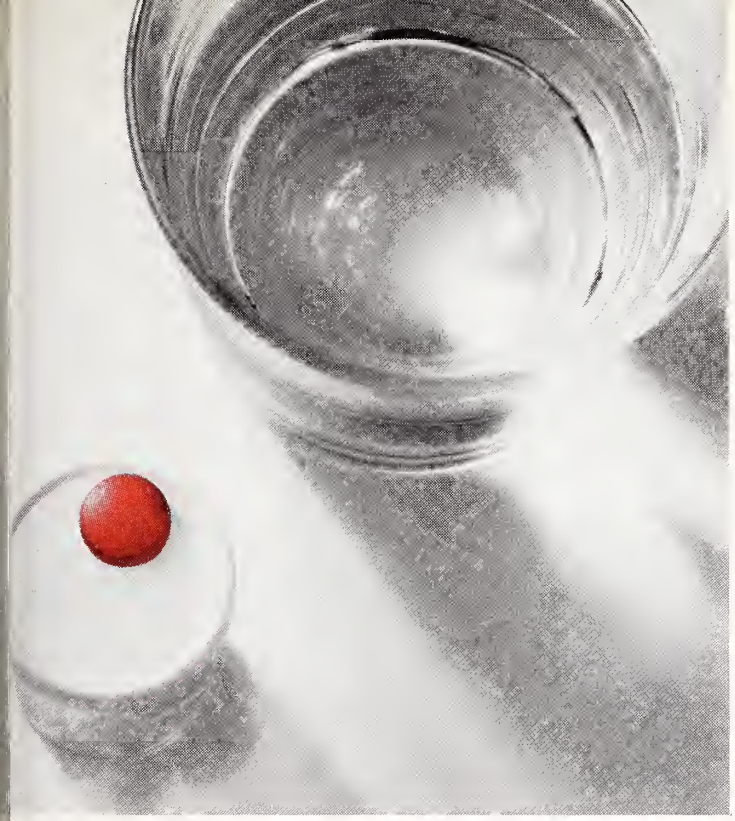
A check for $15,000 was presented to Jennie Edmundson Hospital, in Council Bluffs, on March 1, for the furnishings on the renovated third floor of the building. It represented contributions from the 38 doctors on the staff, in memory of their late colleague, **Dr. Jack V. Treynor.**

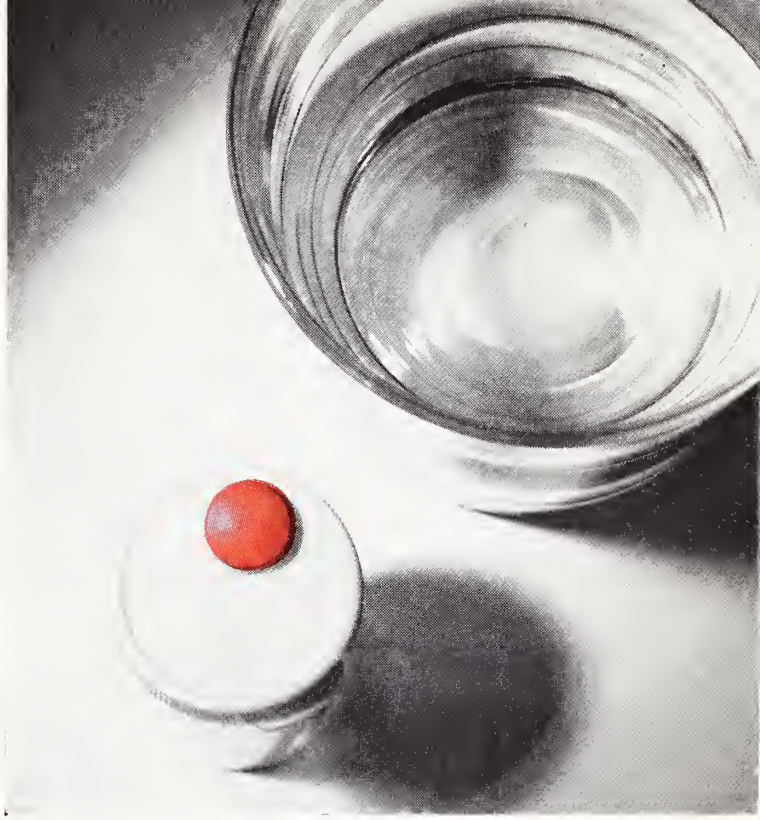
At a District 13 meeting of the Iowa Nurses' Association, held at St. Anthony's Hospital, Carroll, on March 1, **Dr. R. J. Ferlic** reported on a meeting concerned with coronary diseases and corrective measures which he had attended in Chicago.

Dr. Morris G. Sloan, a Boone radiologist, spoke on thyroid diseases and thyroid-function tests at a meeting of the Boone County Registered Nurses' Association on February 21.

Dr. Harry L. Pitluck, of Laurens, spoke on hypnosis at the March 14 meeting of the Eighth District of the Iowa Nurses' Association in Fort Dodge.

Dr. Albert R. Abbott and **Dr. Roger Westerlund,** of Ames, gave instruction in artificial respiration at the monthly meeting of the Story City Fire Department on March 14.





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Dr. Robert Kretzschmar, of Iowa City, the state crusade chairman for the American Cancer Society this year, addressed an open meeting in Estherville on March 15, in support of the organization's fund-raising campaign in Northwest Iowa.

"Community Action in Mental Health" was the theme of the Knoxville VA Hospital's fourth annual institute for leaders in the mental health field, on April 20 and 21. The keynote speaker was **Dr. Francis J. O'Neill,** of Central Islip (N. Y.) State Hospital. **Dr. J. O. Cromwell,** the director of state mental institutions, also participated.

In the interview with a DES MOINES REGISTER reporter in mid-March, **Dr. William C. Wildberger** said that large Iowa counties are not doing as much as they should for the mentally retarded, with the result that state institutions for the retarded have too little money with which to serve all the individuals sent to them. "The big counties ought to have more special-education classes, sheltered workshops, vocational training in the school districts, and other services to the handicapped," so that the institutions at Woodward and Glenwood could principally serve persons from small communities each of which has insufficient youngsters of any one degree of handicap to justify providing special facilities and personnel locally.

Dr. Sidney Robinow, a Des Moines orthopedic surgeon, demonstrated plastic splints and closed-chest cardiac massage at an in-service training school for state highway patrolmen, there, in mid-March.

Dr. Charles Birdsall, an Ames obstetrician and gynecologist, has a 35 mm. camera mounted on a high-power clinical microscope for use in photographing human chromosomes. In a feature story in the April 4 AMES DAILY TRIBUNE, he was quoted as saying that he has used it for the past two years in diagnosing sterility, leukemia and congenital defects, and in genetic counseling.

Dr. Neil J. McGarvey, of Des Moines, has been appointed medical director of Hawkeye National Life Insurance Company, Des Moines, which received its charter to sell life, accident and health insurance in Iowa on March 10.

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Two new physicians will join Medical Associates, Clinton, on July 1. **Dr. Kerry L. Jensen** is a graduate of the U. of I. College of Medicine who will have completed a year of internship and a year of residency at Kansas City General Hospital. He is a general practitioner. **Dr. Frank Rogers,** a graduate of the medical school at the University of Utah, interned and is serving a surgical residency at Orange County Hospital, in California. Currently he is chief surgical resident there.

At the March 24 meeting of the Woodbury County Medical Society, at the Holiday Inn at Sioux City, **Dr. Elmer M. Smith,** director of medical services for the State Board of Social Welfare, discussed "Medicare: Iowa Implications."

Dr. Donovan F. Ward, of Dubuque, has been appointed to the Council on Legislative Activities of the AMA.

The Midwest Association of Plastic Surgeons held its sixth annual meeting in Iowa City March 24-26. **Dr. Adrian E. Flatt,** of the U. of I. College of Medicine, concluded his term as president of the group at that time.

Dr. Rubin H. Flocks, professor and head of urology at the U. of I. College of Medicine, has been reelected president of the American Board of Urology. He also serves as secretary of the 2,500-member American Urological Association, and is a member of the National Advisory Cancer Council of the HEW Department.

Dr. Robert E. Carter, assistant dean of the U. of I. College of Medicine and a professor of pediatrics, spoke to medical students at Ohio State University, April 21, on "The Advantages of General Practice."

Iowa Lutheran Hospital Day, this year, will be held in Des Moines on Saturday, June 11. The program, beginning at 1:00 p.m., will highlight **Dr. W. C. Sheldon,** of the Cleveland Clinic, who will speak on "Coronary Angiography," and **Dr. Robert L. Jackson,** of the University of Missouri, who will talk on "Early Recognition and Management of Diabetes in Children." The afternoon session at the Hospital will be followed by a banquet at Hotel Savery. The guest speaker, **Dr. William J. Petersen,** superintendent of the State Historical Society of Iowa, will recount "Tall Tales of the Mississippi."

On February 18, **Dr. Elmer M. Smith,** director of medical services for the State Board of Social Welfare, was chosen to complete a term on the AAGP Board of Directors. He will be due for re-

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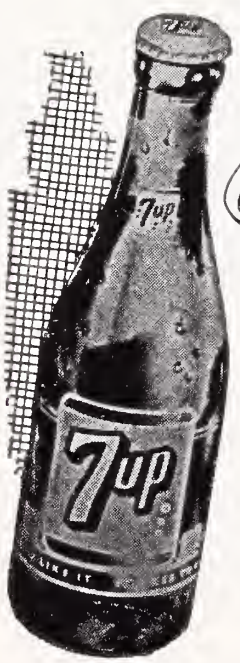

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election or replacement in September, 1967. Dr. Smith is also one of the three IMS representatives in the AMA House of Delegates. He was a general practitioner in Eagle Grove from 1945 to 1963.

At the April 20 meeting of the Polk County Medical Society, held at the Hotel Fort Des Moines, in Des Moines, **Dr. John M. Rhodes**, of Pocahontas, vice-president of the Iowa Medical Society, and **Dr. Robert M. Kretzschmar,** an associate professor of obstetrics and gynecology at the U. of I., discussed the topic "Abortion in Iowa—The Law, the Problems and the Facts."

Dr. Anthony J. Piasecki, an orthopedic surgeon currently in practice at Sudbury, Ontario, has agreed to join Medical Associates, Dubuque, on July 1. He took his M.D. degree at the Ottawa University Medical School, served a residency in his specialty in the United States, and is board eligible.

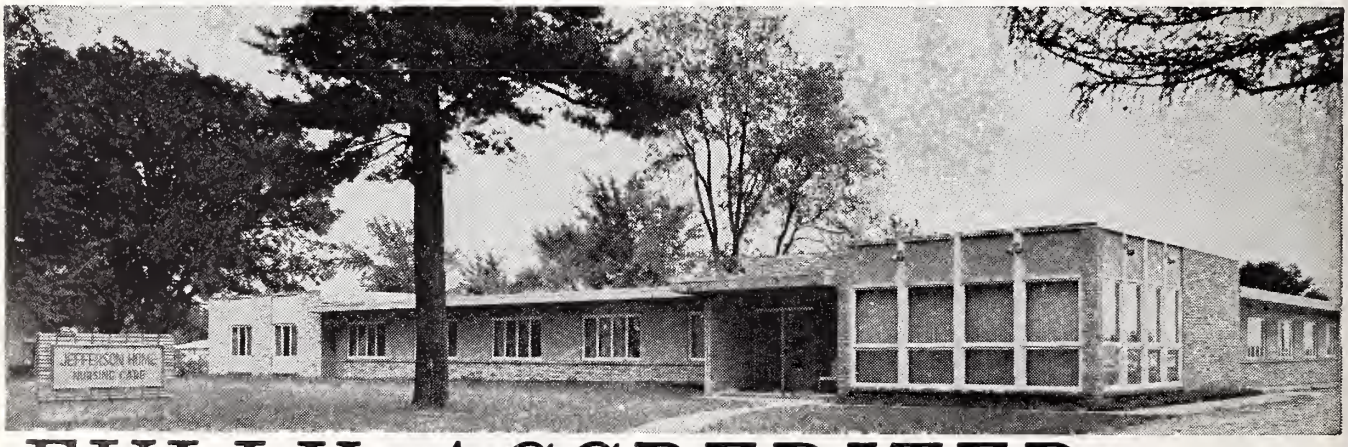
Deaths

Dr. Joseph B. Bywater, 86, who practiced in Iowa Falls from 1909 to 1917, and from then until 1945 in Grand Junction, died in Des Moines on March 7. He was a graduate of Rush Medical College.

Dr. William C. Cummings, 91, a graduate of the U. of I. College of Medicine who practiced for many years in the Greeley, Ryan and Hopkinton areas, died on March 1 at the Veterans Administration Hospital, in Des Moines. In recent years he had lived at the Old Soldiers' Home in Marshalltown.

Dr. Aaron Quinton Johnson, 68, a Sioux City surgeon since 1929, died in Acapulco, Mexico, on March 12, while on vacation there.

Dr. William M. Sproul, 67, who practiced in Des Moines from 1928 to 1958, died in California on April 4 after an illness of a few months. He was president of the Iowa Chapter of the American Academy of General Practice in 1955, and vice-president of the Iowa Medical Society in 1956. He went to California to join the student health service at San Jose State College, but at the time of his death he had been in retirement for about two years.



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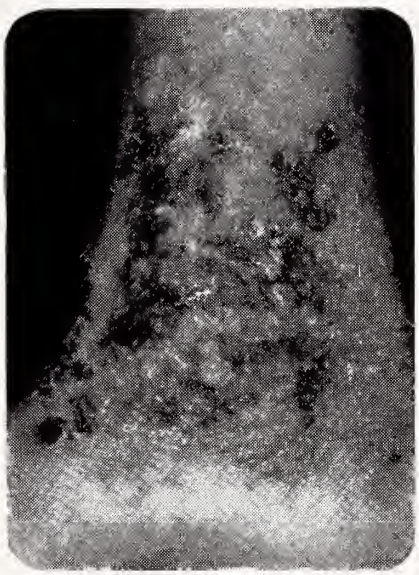
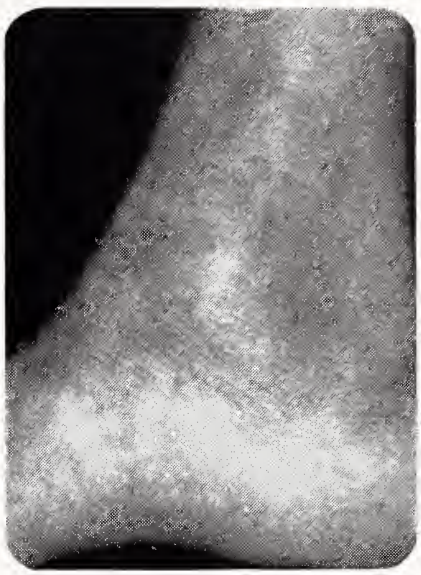


R. R., Age 11—Before treatment—atopic eczema of long standing



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ecautions and Side Effects: Do not use in the eyes or in e ear (if drum is perforated). A few individuals react unvorably under certain conditions. If side effects are enuntered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

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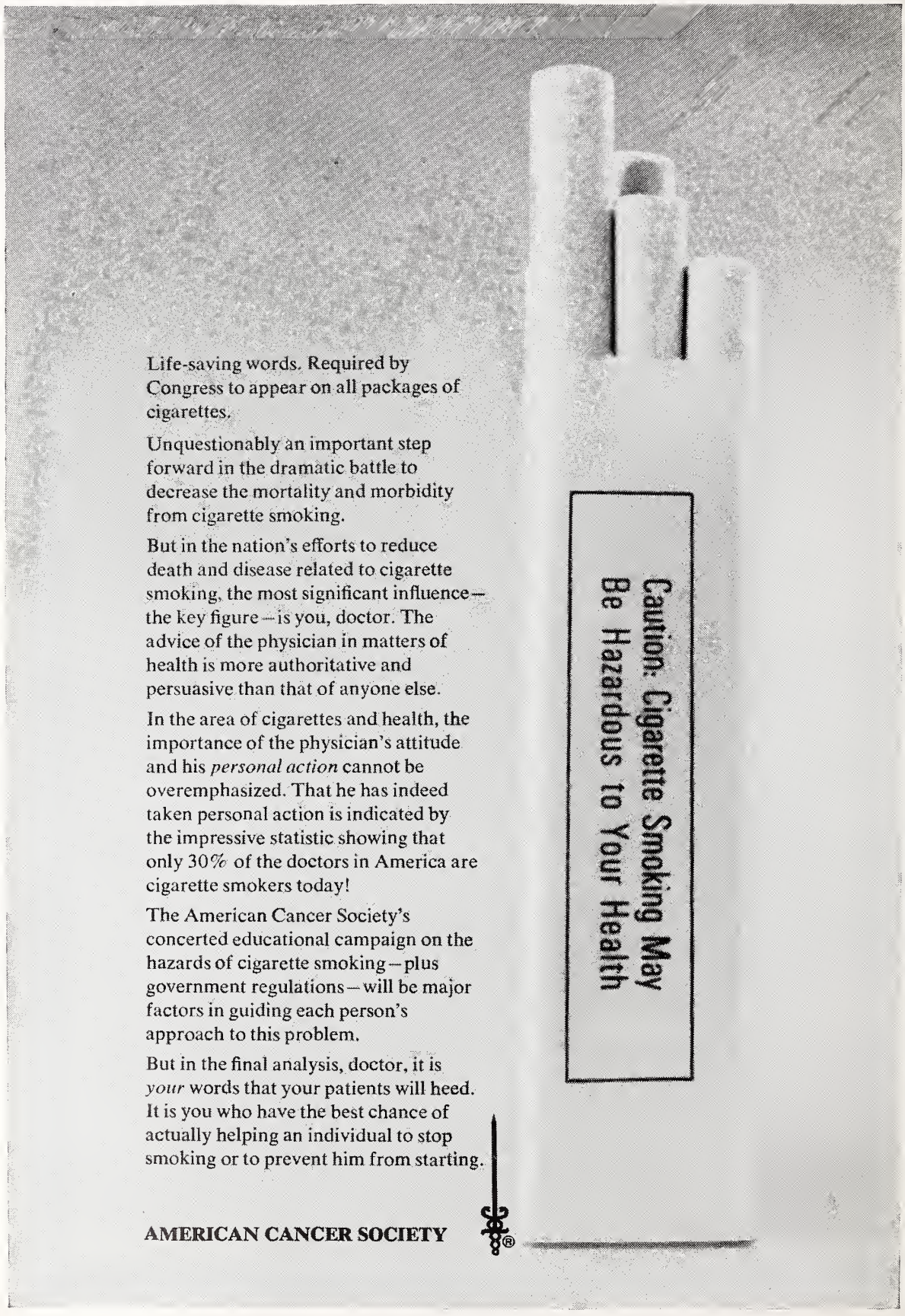

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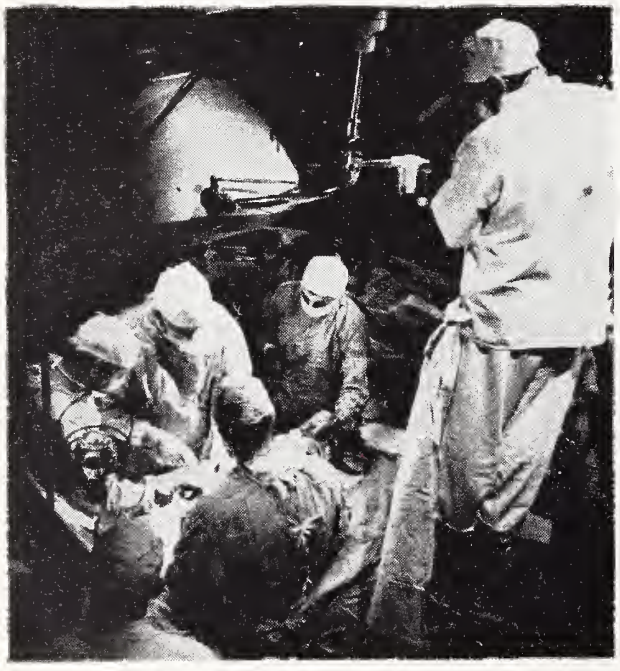

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The Month in Washington

Washington, D. C.—The importance of the role of the general practitioner is emphasized in the recommendations that the National Commission on Community Health Services made to President Johnson. The Commission said that everyone should have a personal physician, even under the group-practice system. Under these conditions, the commission added, group practice should be stimulated. It is essential that the physician-patient relationship be strengthened "if comprehensive personal health services of high quality for each individual are to be achieved," it declared.

"The long-range import of the recommendation of having the personal physician assume responsibility as the central source for preventive health service and continuing care, most particularly its impact on medical education, is well appreciated.

"The possibility of attracting a sufficiently large number of medical graduates to careers as personal physicians presupposes a general recognition of the importance of the role and commensurate rewards in professional satisfaction and income comparable to that of other physicians. In all its ramifications, the national effort must be comparable in magnitude to that which expanded medical-research personnel in the last two decades. Large-scale financing will be necessary for the support of teachers, students, facilities, programs and educational research."

Others of the Commission's recommendations included: breaking down eventually all separate systems of health care, such as for veterans, labor union members, merchant seamen and the medically indigent, and orienting all health-care services on a community basis. President Johnson endorsed the recommendations, but predicted that it would be many years before they would be fully implemented.

The Commission is a private, non-profit study group formed in 1962 by the National Health Council and the American Public Health Association. Thirty-two members from medicine, business, labor and other fields make up its membership, and it is headed by Marion B. Folsom, a former Secretary of Health, Education and Welfare.

"To achieve an integrated program which will provide comprehensive personal health services of high quality to all in each community, it will be necessary to weld together many separate programs into a community-wide program," the Commission said. "Accomplishment of this goal would preclude new construction or the expansion of hospitals for these separate groups, and would require total integration of such facilities into the total community services. Financing . . . will continue to come from a variety of resources."

* * *

For the Food and Drug Administration, the National Academy of Sciences-National Research Council will undertake a new evaluation of the efficacy of about 4,000 prescription drugs, starting this summer. "The determination of the efficacy of new drugs marketed from 1938 to 1962 is called for under the Kefauver-Harris Amendments of 1962," Dr. James L. Goddard, the FDA commissioner, said. "I am grateful that the National Academy, with its capability of calling upon the talents of the nation's most distinguished scientists, is willing to accept this important public responsibility." The review will be the most extensive efficacy study of drugs ever undertaken, Goddard said. Results of the study will guide the FDA in its final determination of the effectiveness of the drugs.

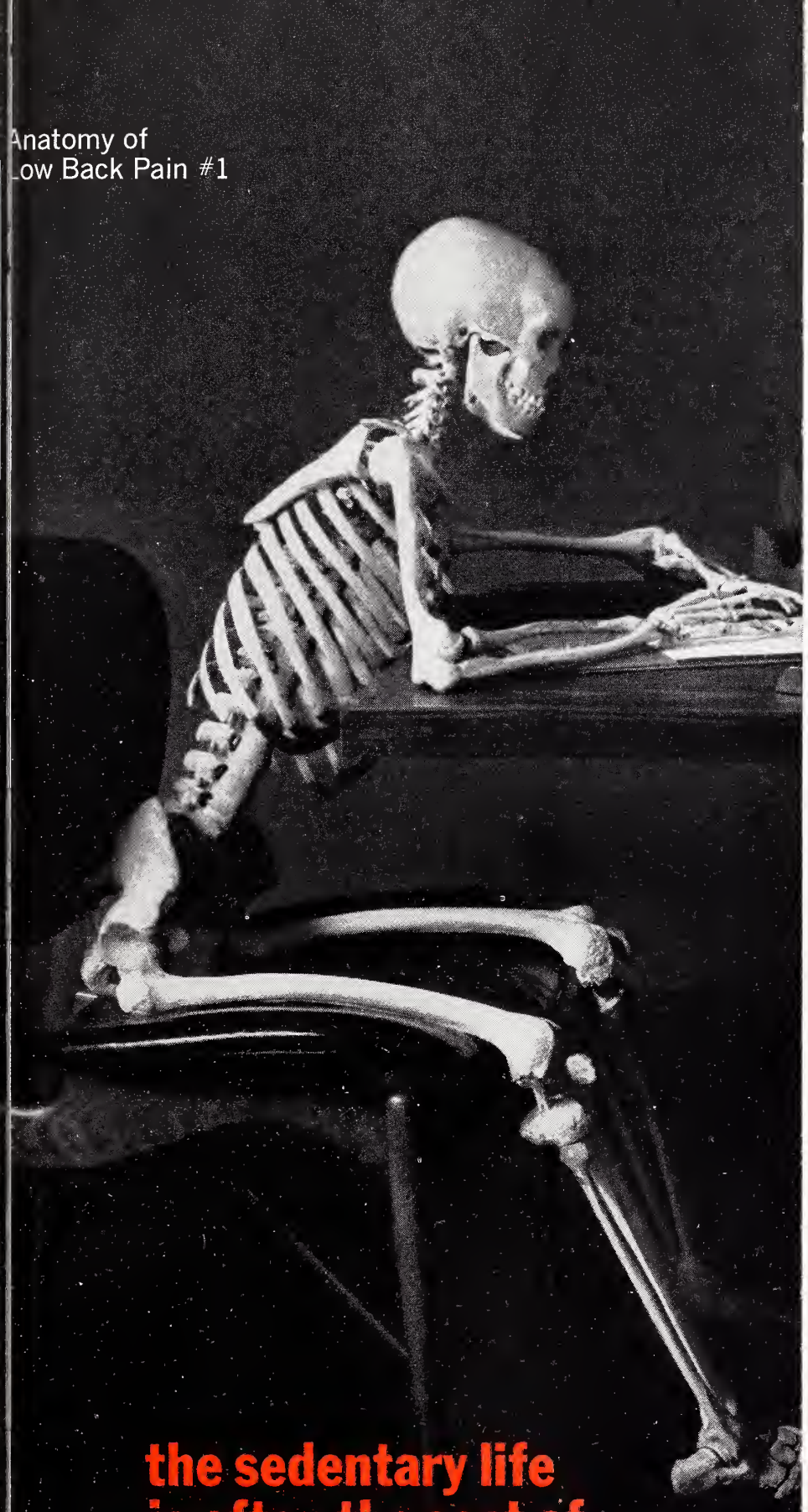
C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, commended the selection of the academy for the task. "PMA is delighted that this method was selected," he said. "Based on past activities, we are certain that the Academy will work with both industry and medical practitioners in forming guidelines for determining the effectiveness of these products."

"Although this undertaking will be of extraordinary magnitude for an Academy-Research Council advisory study, it is also one of extraordinary importance to the medical profession and the nation," Dr. Frederick Seitz, the NAS-NRC president, said. "It is essential that the study have the strongest possible professional base; we shall, therefore, depend on the cooperation, not only of many individual medical scientists, but also of the major professional societies interested in therapeutic drugs."

Since October, 1962, manufacturers have been required under the Kefauver-Harris Amendments to submit substantial evidence to support therapeutic claims before receiving FDA approval for the marketing of a new drug. The NAS-NRC review will test the efficacy of new drugs marketed under the provisions of 1938 legislation which required only a showing that drugs were safe for their intended use. The 1938 Act excluded from FDA approval procedures drugs already on the market, as well as drugs introduced after that date that were generally recognized as safe by qualified experts.

Dr. James Z. Appel, president of the American Medical Association, sharply criticized the FDA's enforcement of the 1962 Drug Act Amendments

(Continued on page 548)



the sedentary life is often the seat of low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ **to relieve pain** ☐ **to relax muscles** ☐ **to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

for the relief of low back sprains and strains

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When uncontrolled diarrhea brings a call for help

When the diarrhea sufferer has run the gamut home remedies without success, pleasant-tast CREMOMYCIN can answer the call for help. It can counted on to consolidate fluid stools, soothe int tinal inflammation, inhibit enteric pathogens, a detoxify putrefactive materials — usually withir few hours.

CREMOMYCIN combines the bacteriostatic agen succinylsulfathiazole and neomycin, with the a sorbent and protective demulcents, kaolin and p tin, for comprehensive control of diarrhea.

INDICATIONS: Diarrhea.

CONTRAINDICATIONS: Do not use in intestinal obstruction, tensive ulceration of bowel, or diverticulosis; in hypersensiti to sulfonamides or neomycin; in pregnancy at term, in premat infants, or during first week of life in the newborn.

WARNINGS: Use only after critical appraisal in patients v hepatic or renal damage, urinary obstruction, or blood dysc sias. Fatal hypersensitivity reactions and blood dyscrasias ported with use of sulfonamides. Consider periodic blood cou hepatic and renal function tests during intermittent or chro use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if th is history of significant allergies and/or asthma. Continued requires supplementary vitamins B_1 and K. *Neomycin:* Watch

your ℞ for Cremomycin can provide relief

re-like neuromuscular block during anesthesia if neomycin sed preoperatively in large doses when renal function is ; watch for overgrowth of nonsusceptible organisms. Con- r possibility of ototoxicity and nephrotoxicity with prolonged dosage.

E EFFECTS: As with all sulfonamides: Headache, malaise, an- ia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, opathy, drug fever, rash, conjunctival and scleral injection, chiae, purpura, hematuria, and crystalluria have been noted. uced fecal output of thiamine and decreased synthesis of min K have been reported. *Neomycin:* Nausea, loose stools.

re prescribing or administering, read package circular with luct or available on request.

omptly relieves diarrheal distress

Cremomycin®

NTIDIARRHEAL

position: Each 30 cc. contains neomycin sulfate 300 mg. ivalent to 210 mg. of neomycin base), succinylsulfathiazole Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

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ere today's theory is tomorrow's therapy

in a speech at Chicago. He listed 10 counts "on the minus side" of the FDA record on administering the Amendments. "The manner in which the Agency suddenly seizes drugs and accompanies this activity with alarming language tends to create an atmosphere of hysteria," Dr. Appel said. "It also is creating a restrictive and undesirable medico-legal climate that will inevitably exert a deleterious influence on the effective use of drugs by the physician. This trend is causing the medical profession much concern. . . .

"Nagging us is the increasing suspicion that regulatory decisions may be dictated more by the technicalities of regulatory language than by appeals to competent medical and scientific analysis and judgment. The tame submission of the pharmaceutical industry to any and every regulatory suggestion or directive, regardless of the medical and scientific facts involved, is unsettling. . . .

"At the time of the passage of the 1962 Amendments and subsequent regulations, we were concerned about the advisability of non-medically oriented lay FDA inspectors' being permitted to inspect and copy the case records of physicians engaged in clinical investigation. This could only result in a non-professional's acting as a judge in a professional area and also invading the physician-patient relationship. We have been apprised of incidents where such inspection has extended even to the personal files of an investigating physician. The future implementing of this aspect of drug investigation cannot help but concern us."

Appel also listed some "plus factors" for the FDA, including the fact that a physician now is FDA commissioner.

* * *

The AMA has reiterated its support of a federal program to aid in modernization of hospitals. Dr. F. J. L. Blasingame, executive vice-president of the AMA, wrote the Senate Health Subcommittee that the AMA supports that provision of an Administration bill (S. 3009) that would provide grants and loans for modernization of hospitals and other medical facilities, through direct federal loans, government guarantees of private loans, and also federal grants with respect to loans, amortizing principal and interests payments thereon up to 40 per cent of the cost of a project.

"While the present Hill-Burton program does provide for modernization of hospital facilities with priority 'in the case of projects for modernization of facilities, to facilities serving densely populated areas,' we nevertheless feel," Dr. Blasingame said, "because of the great need which exists, that the special program contemplated under S. 3009 for modernization of facilities in metropolitan areas is indeed warranted."

The AMA opposed some other provisions of the legislation. It was recommended that aid for diagnostic or treatment centers be eliminated and that federal money be available only to those public health centers operated by public health departments.

Psychiatric Program for Adolescents at University of Nebraska

A highly specialized team to treat mental illness among adolescents will be developed this summer at the Nebraska Psychiatric Institute, Omaha. A four-year grant totaling about $400,000 from the United States Public Health Service will help finance the program.

The adolescent program will be part of a comprehensive research, treatment and care center being developed for infants and children by the University of Nebraska College of Medicine. Included in the center will be a maternal and child health unit; new pediatric facilities; adolescent inpatient services in the remodeled areas of University Hospital; and a special adolescent clinic, headed by a pediatrician and staffed by neurologists, gynecologists, dentists, dermatologists and endocrinologists. This comprehensive center is part of the 16-million-dollar expansion and improvement program of the College of Medicine. Contracts for the first remodeling are expected to be awarded in a few months.

Dr. LaVerne C. Strough, acting director of the Nebraska Psychiatric Institute, said that the Institute has experienced an increasing demand for evaluation and treatment services for adolescents in recent years. The recent mental health planning survey in Nebraska identified adolescent services as a prime need.

Although a special treatment team will be developed, the young patients will be treated on existing adult patient wards at NPI. "Despite special problems, we feel that the presence of adolescents on adult wards can benefit both adult and adolescent patients," Dr. Strough said. The young patients can experience the reality of living with adults and avoid the unnaturalness of an entirely juvenile environment, Dr. Strough added. The patients will range in age from 12 to 19. Treatment will be primarily on a day-care basis, but eight hospital beds will be set aside.

The team will consist of a psychiatrist, registered nurses, nurses' aides, psychiatric social workers, part-time special education teacher, part-time psychiatric social group worker and clerical help.

The Institute has operated a pilot program in the treatment of adolescents since 1964. The results were favorable, Dr. Strough said.

following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.

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FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

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Medical Conditions as Hazards to Driving

In 1947, at the request of the State Commissioner of Motor Vehicles, the Maryland Legislature authorized the appointment of a board of physicians to advise the Commissioner as to whether drivers or applicants for licenses known to have medical conditions should be allowed to continue or to begin driving. The advisory board's experience is reviewed in the March, 1966, issue of the MARYLAND STATE MEDICAL JOURNAL.*

In the first year, 45 people were seen, but the numbers gradually increased until between July 1, 1964, and June 30, 1965, a total of 2,480 were seen during 89 committee meetings. They were referred in any one of three ways: (1) by admitting, on a driver's license application form, to a mental or physical condition that might affect driving: (2) by a report from a physician, a neighbor or a relative; (3) by an action of the police, magistrates, or license examiners.

Of the 7,276 persons considered between July 1, 1962, and June 30, 1965, the board recommended that 5,410 be approved and that 1,866 be disapproved. Few of those approved have since been involved in accidents attributable to their medical conditions. The board's aim is not to prevent anyone with a medical problem from driving, but to make sure that his condition is under the best possible control so as to make him a better driving risk. Most such people are seen at intervals of three months to a year. Those initially disapproved may be approved at a later visit to the board. The board members rely principally on reports from other doctors or from hospitals, and test for themselves only such things as muscle power, blood pressure, etc., when indicated.

During the three-year period just referred to, 1,435 people subject to blackouts, fainting fits, spasms or epilepsy were seen. One thousand were approved, and 435 disapproved. For such people, two or three years without a seizure is a prerequisite to licensure.

Diabetes is the referring cause for 25 per cent of cases coming before the Maryland advisory board. It is an important cause of auto accidents both because of vascular pathology of the retina, heart and extremities, and because of hypoglycemia as a side effect of drug treatment. The board makes sure that diminished visual acuity is within safe limits. Hyperglycemia and ketoacidosis to the level of coma have not been a problem, but all diabetics are warned about the onset of drowsiness as a possible precursor of coma.

In the three-year period, the board has seen 1,032 people with cardiac problems and has disapproved 249 of them, either temporarily or permanently.

Of 1,449 patients with orthopedic problems seen during those three years, 1,363 had paralytic conditions and 86 were amputees. Two hundred six of the paralytics were disapproved, and 16 of the amputees. Only three mental retardates were seen during the three years; one was recommended for approval, and two were not.

Unfortunately, the emotionally disturbed person either is unable to recognize that he cannot drive safely or refuses to accept the fact. Between July 1, 1962, and June 30, 1965, the Maryland board saw 982 patients with some form of psychiatric disturbances and disapproved 447 of them. Five hundred seventy-eight people with atrophic or degenerative neurologic conditions were seen, including multiple sclerosis, myasthenia gravis, Parkinson's disease and Huntington's chorea. Of them, 222 were rejected.

Three hundred ten of the referrals were alcoholics or problem drinkers. Of them, 141 were disapproved. The ratio of disapprovals to approvals in this instance approached 1:2, though overall the board's ratio was about 1:3.

* Baldwin, R. W., Schoolman, L. R., Whittlesey, P., Kinnamon, H. F., Doudoumopoulos, A. N., Hulfish, B., and Hitchman, I. L.: Symposium on medical conditions constituting hazard in driving. MARYLAND M.J., 15:55-58, (Mar.) 1966.

Check for Contact Lenses

Industrial workers and especially first-aid crews are proficient in handling victims of electrical mishaps. Most police officers are trained to administer mouth-to-mouth resuscitation. Now there is a new facet of first aid at which they must become adept.

Contact lenses are so widely used that it is important to look for them in all persons who are unconscious. If such lenses remain in place on the cornea when the eyelids are shut, tears no longer pass beneath the lens to bathe the corneal epithelium. This tissue loses its viability rapidly, and can become ulcerated and subject to infection.

When the lenses are pushed into a cul-de-sac beneath the lids, the danger of corneal injury is almost obviated. The maneuver of pushing the lenses aside can be done by a layman who has been trained. Firm pressure applied to the closed eyelid can slide the lenses out of harm's way, where they can remain even as long as 24 hours.

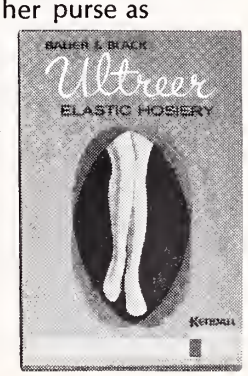
Persons can be injured in mountains or forests remote from professional care. First-aid workers should be instructed to look for and handle the problem of contact lenses in unconscious victims. Physicians and nurses, too, should be alert to this hazard. Not all wearers of contact lenses carry a metal "alert tag" with this information. Checking for contact lenses in the unconscious patient should become a routine procedure.

—Adapted from an editorial in MASSACHUSETTS PHYSICIAN, 25:194, (May) 1966.

You prescribe elastic stockings. She won't wear them. Now what?

Ultreer™

Elastic Stockings so sheer they look like support hose. Both Ultreer and support hose are sheer, shapely, cool and comfortable. But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. They provide the therapy you prescribe. The fashion and economy she demands.
Ultreer stockings have a new low price. So low, she can afford two pairs of Ultreer instead of one pair of regular elastic stockings. There'll be no disagreements there. Ultreer stockings are as comforting to her purse as they are to her legs. New Ultreer are the elastic stockings doctors and women can agree on.



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A 'MAXIMUM SECURITY' ANTIBIOTIC*

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long established as the broad-spectrum agent of first choice in a wide variety of infections

* **WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT**
triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline

* **ESPECIALLY VALUABLE IN U.R.I.**
provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered

* **NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY**
Signemycin 375—high-potency capsules for simpler administration, greater patient economy

YCIN® 375

(tetracycline 250 mg. triacetyloleandomycin 125 mg.)

Indications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug.

Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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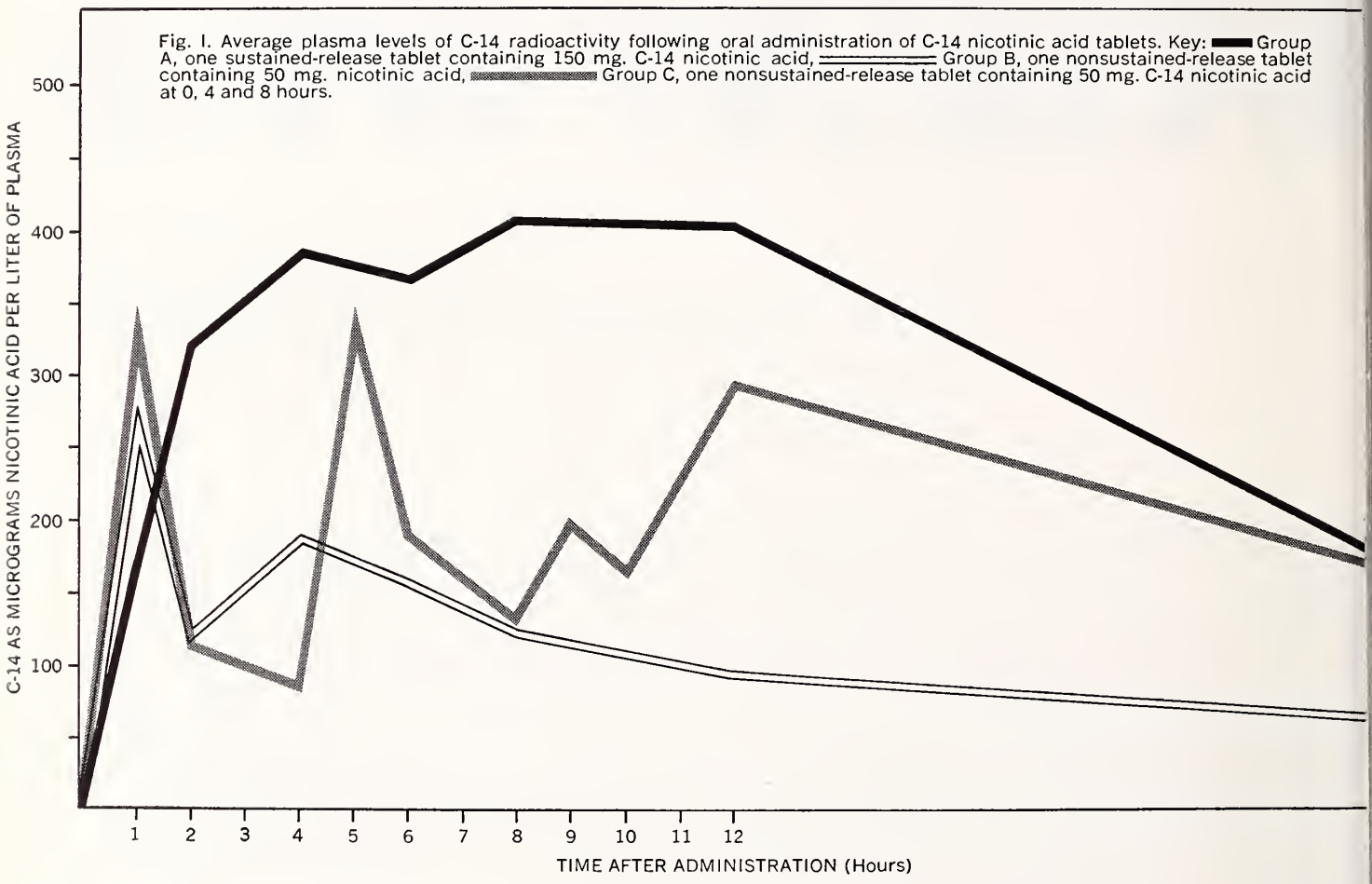
Sustained circulatory, respirato
and cerebral stimulation for t

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be co tinuous on a daily dose of only one Geroniazol TT ta let every 12 hours.

The gradual release of nicotinic acid in Geroniaz TT will provide the well-known peripheral vasodilat tion needed in patients with deficient circulation an with a minimum amount (if any) of "flushing." Als cerebrovascular circulation is complemented by pe tylenetetrazol, long-established as a cerebral and re piratory stimulant.

Geroniazol TT improves the typical, unfortunat signs of senile confusion. Patients become more aler

ted and debilitated

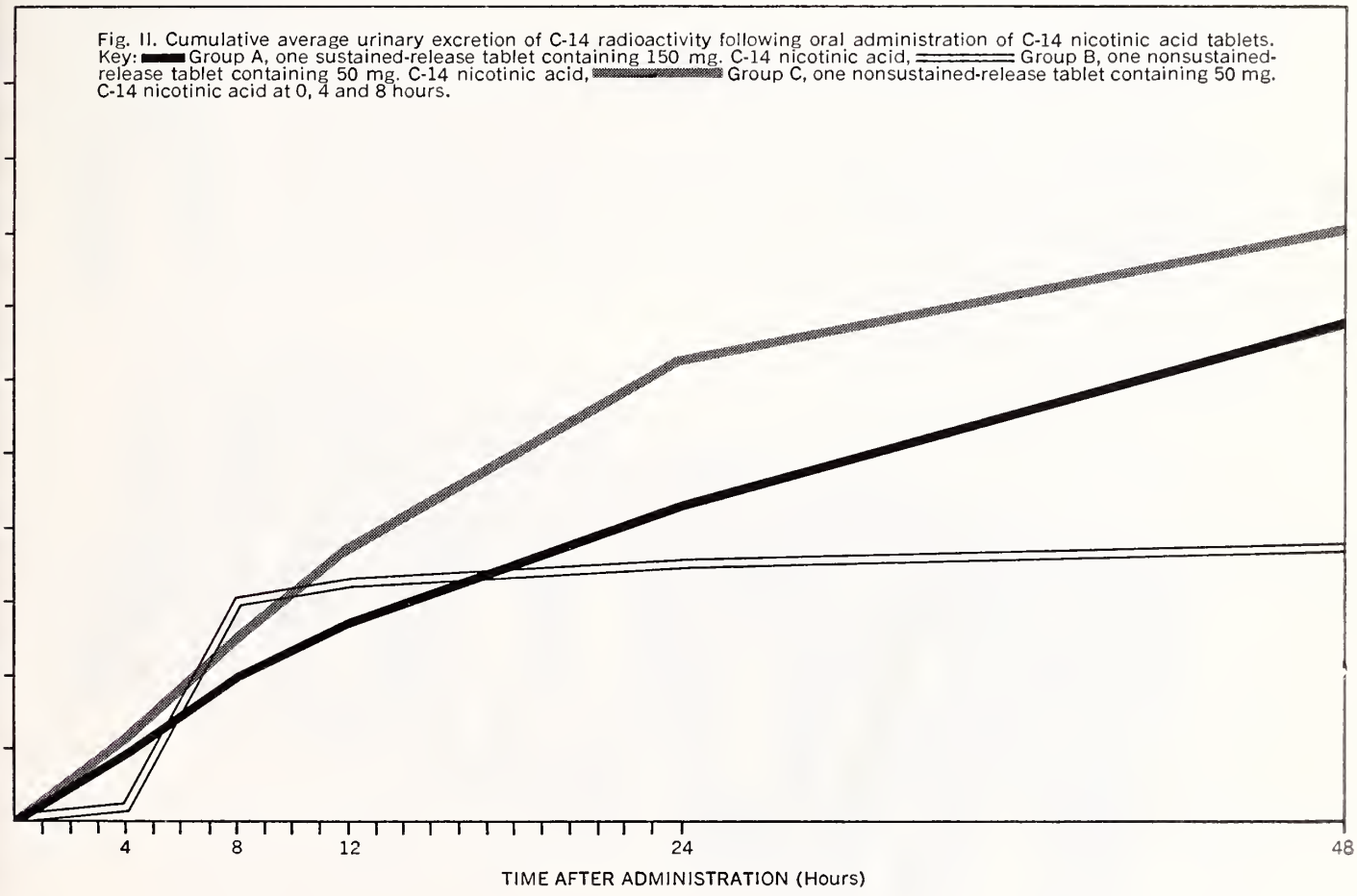


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ss confused and moody. Personal care, memory, notional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will rmit your patients to enjoy the benefits of time-olonged nicotinic acid/pentylenetetrazol therapy, an economical price. Dosage is only one tablet every hours.

ntraindications: There are no known contraindica-ons.

recautions: Exercise caution when treating patients ith a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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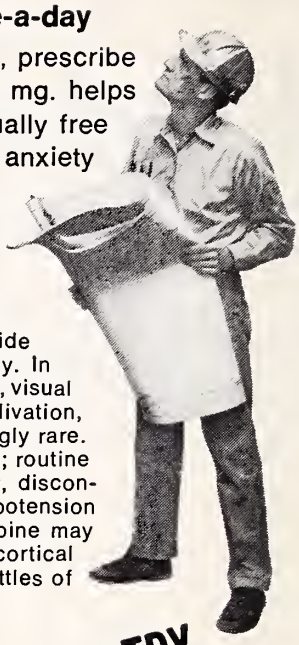
Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

Blueprint for dealing with tension due to stress—Prolixin—once-a-day

For the patient who must be on the job mentally as well as physically, prescribe Prolixin. The prolonged tranquilizing action of as little as one or two mg. helps him cope with tension all day long. Markedly low in toxicity and virtually free from usual sedative effects, Prolixin is effective in controlling both anxiety associated with somatic disorders and anxiety due to environmental or emotional stress. Patient acceptance is good—because Prolixin is low in cost, low in dosage and low in sedative activity. Prescribe Prolixin.



Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

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THE SQUIBB TRANQUILIZER

SQUIBB FLUPHENAZINE HYDROCHLORIDE

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Squibb Quality—the Priceless Ingredient

Coming Meetings

IN STATE

June 11 — **Iowa Lutheran Hospital Day**, Des Moines.

June 16-18 — **Spring Postgraduate Conference, Iowa Chapter, American Academy of General Practice.** New Inn, Lake Okoboji.

CONTINENTAL U. S.

June 3-4 — **Medical Alumni Clinic Days, University of Colorado School of Medicine**, Denver.

June 5-8 — **First International Congress on Smoking and Health**, New York Hilton, New York City.

June 6-10 — **13th Annual Anesthesiology Review Course, Anesthesiology Service**, Wilford Hall USAF Hospital, Lackland Air Force Base, Texas.

June 9-11 — **Initial Emergency Care and Transportation of the Sick and Injured, Committee on Injuries of the American Academy of Orthopaedic Surgeons**, Police Academy, New York.

June 13-17 — **Symposium, "Basic Sciences Related to Anesthesiology," Departments of Anesthesiology, Montefiore Hospital and Medical Center and Albert Einstein College of Medicine**, Montefiore Hospital and Medical Center, Bronx.

June 15-18 — **Postgraduate Course in Neurology for the Internist, American College of Physicians**, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

June 16-19 — **Second Biennial Meeting, California Society of Anesthesiologists**, Sahara-Tahoe Hotel at South Shore, Lake Tahoe.

June 17-18 — **American Rheumatism Association**, Denver Hilton Hotel, Denver.

June 25 — **American Academy of Tuberculosis Physicians**, LaSalle Hotel, Chicago.

June 25-26 — **American Diabetes Association**, LaSalle Hotel, Chicago.

June 26-30 — **Annual Meeting, American Medical Association**, Palmer House, Chicago.

June 27 — **American Association for the Study of Neoplastic Diseases**, Conrad Hilton Hotel, Chicago.

June 27 — **American Association for the Study of Headache**, Conrad Hilton Hotel, Chicago.

June 27-30 — **11th Annual Meeting, Health Physics Society**, Shamrock-Hilton Hotel, Houston.

June 29-July 2 — **American Society of Maxillofacial Surgeons**, Sheraton-Chicago Hotel, Chicago.

June 30-July 2 — **Symposium on Clinical Aspects of Renal Disease—Ischemic Heart Disease and Cardiac Disease, sponsored by Tidewater Heart Association, Council on Clinical Cardiology, American Heart Association**, Cavalier Hotel, Virginia Beach, Virginia.

July 6-9 — **Idaho State Medical Association**, The Lodge, Sun Valley.

July 10-13 — **Conference on Medicine and Religion, University of California Extension**, Lake Arrowhead.

July 10-15 — **43rd Annual Conference, American Physical Therapy Association**, Biltmore Hotel, Los Angeles.

July 11-14 — **Postgraduate Course in Ophthalmology, University of Colorado School of Medicine**, Estes Park.

July 15-17 — **Rocky Mountain Cancer Conference**, Brown Palace-West Hotel, Denver.

July 18-23 — **12th Annual Postgraduate Course for the General Practitioner, University of Colorado School of Medicine**, Denver.

July 20-22 — **Biannual Radiologic-Orthopedic Seminar of Montana**, Glacier Park Lodge, East Glacier.

July 25-28 — **9th Annual Ruidoso Summer Clinic, New Mexico Chapter of American Academy of General Practitioners, Chaparral Motel**, Ruidoso.

July 25-29 — **Interpretation and Therapy of Cardiac Arrhythmias, Hahnemann Medical College and Hospital**, Marriott Motor Hotel, Philadelphia.

July 27-29 — **Postgraduate Course in Dermatology, University of Colorado School of Medicine**, Aspen.

ABROAD

June 16-22 — **Fifth World Congress on Fertility and Sterility, Swedish Society of Obstetrics and Gynecology**, Stockholm, Sweden.

June 26-July 2 — **Seventh International Congress of Gerontology**, Vienna, Austria.

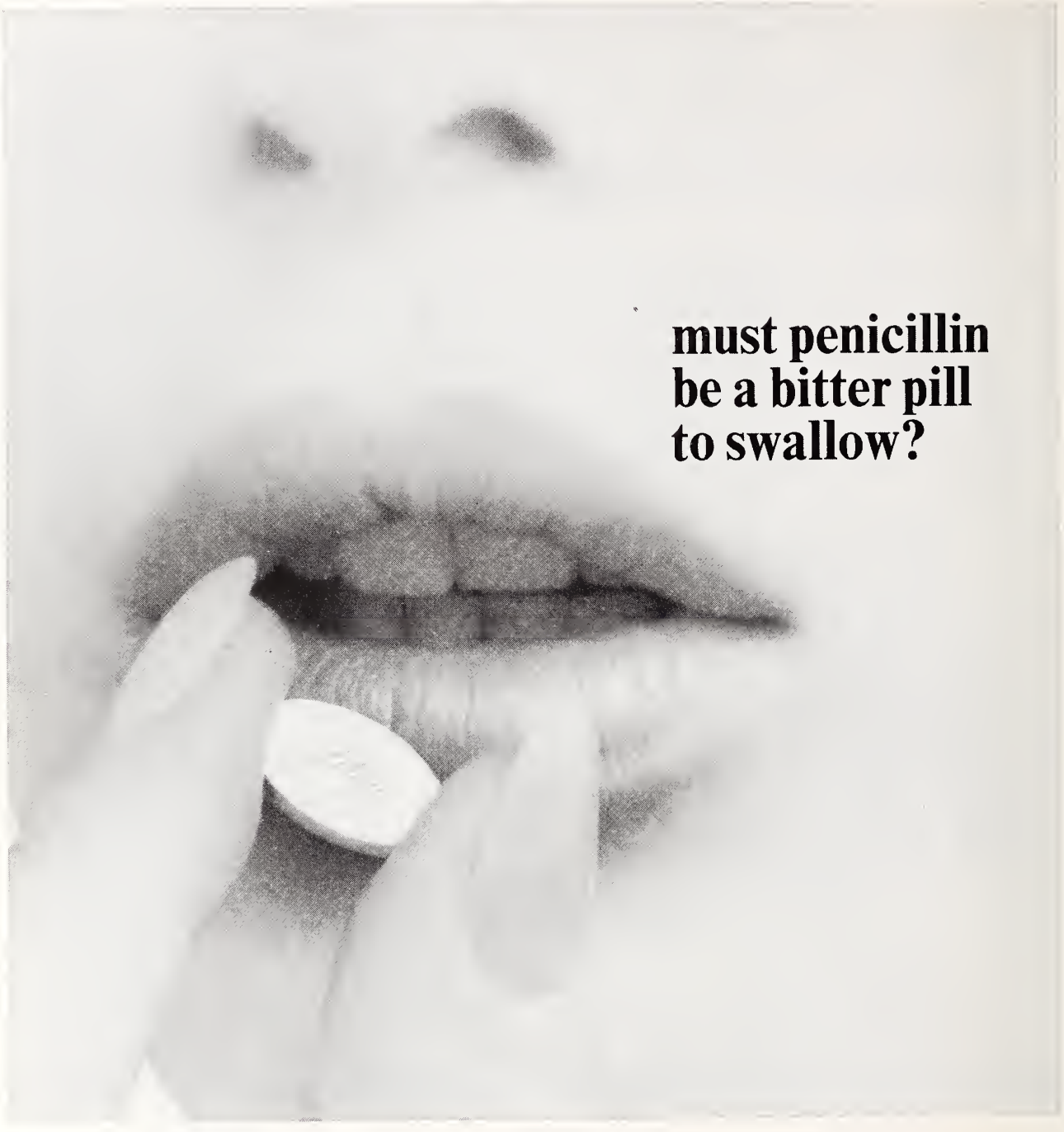
June 30-July 5 — **International College of Surgeons, New England and East Canadian Region Meeting**, Mont Gabriel, Quebec, Canada.

New Diabetes Film Offered

In *Finding the Hidden Diabetic*, a new 39-minute film aimed at professional audiences, four outstanding diabetologists discuss the causes of today's swift increase in diabetes prevalence, and then explore some challenging ideas on how to attack the problem. The film was produced as an educational service of The Upjohn Company, and is available on request for showing in medical schools, in hospitals, at medical and public health meetings, and to other professional groups.

Why it is so important to detect diabetes in its early stages, how this can be done by selective screening technics, which "high risk" population groups should be tested, how to lessen or possibly prevent the common vascular complications of diabetes, and what screening and diagnostic criteria should be observed, are among the subjects explored in the film.

According to Dr. Glenn W. McDonald, of U.S.P.H.S., there are now at least four million diabetics in the U. S., half of whom suffer from the disease without knowing it. Diabetes prevalence will continue to rise, Dr. McDonald says, explaining that the disease has been on the increase ever since 1921, when insulin was discovered. Requests for the film and accompanying brochure should be addressed to: Diabetes Detection Program, Room 914, 342 Madison Avenue, New York, N. Y. 10017.



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Legal Advice to Physicians on Personal Matters

ROBERT B. MURPHY, LL.B.
Madison, Wisconsin

IT HAS BEEN my good fortune for more than 30 years to work closely with organizations of professional men and with their respective memberships. More relevantly here, for some years I have been counsel to several medical organizations and to quite a number of practicing physicians. By advising on *collective* as well as on *individual* problems of doctors, I believe I have been able to add a dimension to my understanding that is transferable when I am called on in either area. I should like to convey something of this extra dimension to you. I confess to a special fondness for professional people and their organizations, although I am well aware that such a statement would be considered non-perceptive and even simplistic in certain contemporary social and political circles.

The subject assigned to me is the kinds of legal advice needed by physicians on personal matters. From a lack of time, I must omit consideration of certain managerial, legal and tax aspects of medical practice. Experience compels me to say, however, that the two are only artificially separable, for both involve the same human beings whose lives are characterized by a continuous intermingling of the personal and the professional. Only for brevity and emphasis can one separate the personal from the professional life of the physician, or the medical from the economic man.

Let me make it clear that even if I were a John Marshall or an Oliver Wendell Holmes, Jr.—the latter a distinguished jurist son of a distinguished physician—I could not offer you infallible rules or guaranteed technics in the course of a 30-minute presentation. First of all, there are 50-some systems of state and territorial law in this country, and at this moment I don't know how many of federal law. They have numerous similarities, but many significant differences.

I shall *first* indicate to attorneys certain considerations in the professional training and economic habits of physicians which merit special attention and should be important factors in their planning. *Second,* I shall suggest to physicians certain time- and money-saving functions which attorneys are in a position to perform for them in connection with their personal planning. *Third,* I shall enumerate representative transactions or areas in which physicians need legal advice, and in which attorneys should be equipped to advise competently.

PROFESSIONAL TRAINING AND ECONOMIC FACTORS

Turning to the first point, physicians spend more years in formal training, on the average, than the members of any of the other professions. A minimum of two years of preprofessional study is followed by four years of medicine and at least one year of internship. That makes seven years. A majority of young physicians today go into specialty training which requires from two to five additional years. Most of them are called into military service for two years, and sometimes longer. As a result, many of today's physicians are 30 to 32 years of age or older before they begin the private practice of medicine.

This is certainly a long and costly preparation, and a postponement of normal earnings. Although a majority of physicians get late starts economically, they are better compensated initially than any other professional group, and tend to sustain their high earnings through their middle or later 50's. Typically their professional earnings tend to decline by age 60, if only from the fact that they can no longer keep up their earlier pace. In an organization of several physicians, however, it is possible to maintain earnings as one of the benefits of group practice. By careful planning, the older man is often enabled to do whatever he does best, and to do it most if not all of the time.

Nevertheless, the fact remains, particularly in the case of the solo practitioner or the physician who has only one or two associates, that the conservation of his energies and his own standards of

Mr. Murphy is general counsel to the State Medical Society of Wisconsin and the Wisconsin State Dental Society, and a member of the firm of Murphy, Stolper and Desmond. He made this presentation at the 1966 annual meeting of the Iowa Medical Society.

professional care ordinarily result in his doing somewhat less after his middle or later 50's, and in his earning somewhat less. This tendency is not always appreciated by attorneys, whose own earnings climb more slowly but tend to remain at or near their peak later than do those of other professional men.

The physician is thus atypical of society at large, and even of professional people. Possibly his three distinguishing economic characteristics are (1) a late start, (2) immediate and generally sustained high earnings until the approach of age 60, and (3) a tendency toward a decline in professional earnings by age 60. Any broad planning by an attorney for physician clients must necessarily take such economic factors into account.

There are a few more observations that I can add. During the past 20 years the average earnings of physicians have been the highest of any of the professions. Second, physicians have rather distinctive spending patterns. Many are in debt when they begin to practice. Many of them tend to spend more on housing, cars, recreation, education of children and postgraduate education than some other professional men, and much more than business men of comparable earnings, who often are systematically buying into businesses. Such expenditures call for *cash* outlays, and correspondingly reduce what is available to them for other purposes. During their peak earning years, physicians are perhaps the most heavily taxed significant segment of the professional or general population. It has been estimated that the average physician pays out approximately 40 per cent of his professional and other earnings in direct and indirect taxes.

The average physician has a special and even an urgent need *to save part of* his income so as *to generate capital.* This is no longer easy for anyone to do. His second great need, once he has amassed some capital, is to conserve it for himself and his family while he lives, and for his family and favorite causes following his death.

In brief, physicians as a whole earn well, spend generously, and although unquestionably capable of sound judgments in their personal economic planning, are unlikely to engage in it without stimulation, programming and even prodding from one or more advisors.

THE ATTORNEY AS THE PHYSICIAN'S PLANNING COORDINATOR

I have indicated some of the economic and other considerations which either are peculiar to physicians or call for special emphasis in their cases, and which a knowledgeable attorney should keep uppermost in his thinking. Before considering some transactions or types of personal planning that are important to a physician, and in all of which the professional services of an attorney are needed, let me offer some observations on the practicability of having attorneys serve as coordinators of the physician's planning.

Though attorneys have all the weaknesses which the rest of human flesh is heir to, their training, traditions and ethics are all designed to assure that the rendition of professional services is kept free from personal or conflicting considerations. Thus, an attorney may be in a position to advise a physician client soundly about the purchase or financing of real estate—not alone because of his legal training, not alone because he may have had a broad prior experience in this area of advice, but also because he has no financial interest in the particular property. Again, an attorney may advise a physician client about a particular security brokerage firm or individual broker because he knows the firm, knows of the integrity of its members and of their competence, and yet has no financial stake in making the recommendation. By the same token he is in a position to evaluate not alone the legal aspects of an insurance program, but also the probable adequacy of coverage limits—again because of his combination of training and experience. Yet he does not have a financial stake in the sale of particular insurance contracts.

Where a corporate trustee or executor is concerned, the attorney can speak from experience on the cost and effectiveness of administering various types of agency accounts, and of lifetime or testimentary trusts, with an objectivity based upon knowledge and observation. Again, he has no financial interest in the matter, apart from his professional fees.

In similar fashion, in helping clients acquire or conserve capital and meet personal and family obligations realistically, the typical attorney has worked often and closely with certified public accountants. Professional accountants perform services of increasing importance for individuals who have property interests. Their assistance has importance at the time of acquisition, addition to, or disposition of assets. Such services are of substantial help in both tax and nontax areas. In an increasing number of instances, attorneys and certified public accountants work as a team in evaluating the income-, gift- and estate-tax aspects or consequences of transactions in which a physician may or could engage.

In brief, the attorney is qualified by training and by experience to serve the important function of assisting in the design of certain types of professional and personal planning. In addition, and by reason of his knowledge of the manner in which various types of consulting specialists function, he is able not only to recommend such advisors, but to follow through with them as they perform their tasks. Through intelligent coordination, he can save a busy physician valuable time and

money, and materially assist him in bringing his personal planning from the paper stage to reality.

REPRESENTATIVE TRANSACTIONS

Real Estate. By the time the average physician becomes conscious of the need for legal services, he is probably married, nicely in debt, and desirous of buying and financing a home. Probably a majority of property buyers think that the only function for an attorney in a real-estate transaction is to examine and give an opinion on the title to land. Demanding as this traditional function is, the attorney's technical knowledge and judgment are frequently needed in a number of other areas related to real estate acquisition or development. The attorney can frequently render valuable services by checking and recommending any needed modifications in the contract for purchase. Such a contract may spell out not only the price and terms, but without the physician's becoming aware of it, may encumber him with the burden of back taxes, special assessments, the full cost of connecting the utilities, and even the preparation of an abstract of title or the premium on title insurance. If the physician would like to combine a home and office, develop a large home into two or more living units, convert an old home or an existing business property into a professional office, or build a new office, he must be sure of the applicable zoning requirements before he signs anything.

Another consideration, especially outside the community-property states, is whether the purchasing physician should take sole title to the property, whether his wife alone should do so, or whether title should be taken by the physician and his wife in joint tenancy or as tenants in common. Each has different legal consequences and may have different and substantial income-tax, gift-tax and estate-tax price tags. A quite different situation is presented when the property is held by a partnership or corporation.

As an aside, I might add that more than one physician has learned to his surprise that although he was permitted to *buy* land in his own name, he could not *sell* that land without the acquiescence and signature of his wife. The effect of her signature is to bar her right of dower, which is unripened or inchoate (to employ a legalese term) so long as her husband lives, but would come into existence if he were to die first.

Life Insurance. The typical physician probably has one or several life insurance policies in force before he ever sees an attorney or thinks in terms of personal planning. Probably some of that insurance was taken out by his parents when he was very young. Possibly some of it is term insurance which he took out while he was in medical school, in training, or in military service. Most physicians have a general appreciation of the importance of life insurance, but few of them are likely to have explored the truly remarkable flexibility and variety of the contracts available to them today.

Many physicians lack balanced life insurance programs. They do not have enough insurance of the kinds that they need. Some of them pay too much for what they get. Others do not convert at the right times. Still others need but have not made sure that their policies provide waivers of premiums following total disability. Many do not understand the difference between the *actual net cost* of insurance and its *apparent cost* as reflected in the annual dollar outlay. Convertible term is of great importance to physicians because the conversion right will be available to them irrespective of the state of their health. The right to convert to annuities is frequently a valuable one, since the importance of basic life protection for dependents declines with the availability of other assets.

Life insurance is the easiest and, especially for the young physician, the least expensive substitute for capital. One of the leading authorities on estate planning, Mr. Joseph Trachtman, has paid glowing tribute to this form of debt and family protection in the following words:

> "Sweeping statements about the importance of life insurance are commonplace—but its importance is not overstated. Life insurance is often the greatest asset in an estate and is a very important factor in planning large as well as small estates. The methods by which it may be used to solve problems are countless and are often neglected."*

Low-cost life insurance with a declining principal can be used to assure the payment of a mortgage or other substantial and long-term indebtedness. It can also provide educational funds for children. It can help fund the purchase of the interest of a deceased partner. It will pay the debts and taxes due from an estate, and thereby avoid the forced sale of a home, office building or some other property in an unfavorable market.

In some situations, insurance can and should be changed from ordinary to paid-up life so that no more cash will be required for premium outlay. Particularly is this likely to prove feasible during a physician's later years, when he has other assets and less need of insurance protection than earlier.

In some situations it may also be desirable for a physician to transfer ownership of part of his life insurance program to his wife, a trustee or others —a point which will be referred to later.

Modern life insurance has manifold forms and uses which give it a value far beyond what was dreamed of even 30 years ago. This is true despite its principal limitation, namely that in all but a small number of cases it has a fixed principal amount which does not take into account the con-

* Trachtman, Joseph: ESTATE PLANNING (Practicing Law Institute, 1964) p. 67.

stant erosion of the dollar. Even that limitation can be overcome through some of the policies available today.

Working with your attorney, a qualified life-insurance advisor who has the requisite integrity and competence, preferably a Certified Life Underwriter (CLU), can make your life insurance program perform a wide variety of functions tailored to your particular needs. Insurance can be moved around, much like blocks, to fill gaps in a physician's estate. When a substitute can be arranged, a policy or policies can be moved to another location to fill another gap or perform another function.

Other Insurance. This subject is so vast and so important as to warrant the detailed attention of several speakers. Suffice it to say here that as soon as possible a physician should carry amounts of insurance suited to his income, to the size of his family and to the number of his personal obligations. It should be of four kinds:

1. *Health Insurance.* A physician may not feel the need of surgical-medical coverage for himself, but may wish to provide it for his wife and children. The same may be true of insurance providing protection against the risk of hospitalization or the need for other institutional care. Many physicians may not care for *basic* protection in these two important areas, but may find it comforting to carry *catastrophic protection.* During the past year, many Blue Plans and commercial carriers have developed comprehensive coverages to take over where basic or Medicare coverage stops.

2. *Time Loss.* Because the proceeds of income-replacement insurance are not subject to income taxation, a given dollar goes much farther if it comes from that source than it would if it were from professional or investment income. A physician should carry enough of it to be sure he can meet his basic living requirements and those of his family following a sustained illness, whether from an accidental or other cause.

3. *Overhead Insurance.* If the physician is self-employed, or is part of a small organization, he will do well to carry overhead insurance. In essence, it is an extension of the time-loss concept, and provides a guarantee that the fixed charges that he must meet whether he works or not will not drain his income from time-loss policies or general assets. It will pay his office overhead while he is incapacitated.

4. *Public Liability.* It is not enough to carry public liability insurance on your car. On both financial and public relations grounds, it is also important for you to carry comprehensive protection, with realistic limits, against the risk that someone will sustain an injury while on your personal or office premises. Fortunately, such coverage is not expensive.

Although I have limited my discussion to matters involving the physician as an earner who is faced with certain problems—some of them peculiar to his profession and some common to other men of comparable incomes—I can't refrain from urging you strongly to have your personal attorney analyze your professional liability policy at least every two years. More than that, he should keep his own information sufficiently updated so that he can tell you of developments which are available to you in the area of professional liability insurance. He should check carefully the dollar limits of your coverage, but he should check the contract provisions just as carefully

The spectacular increase in the complexity of medical practice during the past two decades has been pretty well matched by a growth in the ingenuity of the public, the courts and attorneys. I think it can be said that our generation is preoccupied with questions of health, and that the high standard of performance of the medical profession has created a public image which permits very little deviation from the nearly perfect. As only one example of a comparatively recent development, some professional liability policies now provide at least limited protection against judgments for defamation. This is an area of the law under which a patient or his representatives might seek redress for the physician's allegedly wrongful disclosure of confidential matters concerning him, or for the doctor's slandering or libeling him and damaging his good name.

Wills. The making and timely revising of his will are among the most important acts in the life of any individual, including a physician. In a will, a document operative on his death, a man endeavors to provide for the needs of those closest to him, or for causes dearest to him, under circumstances approximating as closely as possible the decisions and dispositions he would make if alive.

It is a systematic device for making the wisest possible use of his property. The state attaches a very high dignity to wills, and the courts for many centuries have endeavored to carry out the provisions of such documents as closely as possible. Today as never before, the provisions of wills need to be flexible enough to meet changing conditions. They also must provide sufficient cash or life insurance to pay debts and taxes. Otherwise, forced sales may partially or wholly cripple an estate plan.

Above all else, a will should be drawn only after careful reflection. It should be kept as simple and as clear as possible, and it should be reviewed periodically. In the latter connection, the attorney's continuing ethical responsibility calls for emphasis. The following is quoted from Opinion No. 210 of the Ethics Committee of the American Bar Association:

"Many events transpire between the date of making a will and the death of the testator. The legal signifi-

cance of such occurrences is often of serious consequence, of which the testator may not be aware, and so the importance of calling the attention of the testator thereto is manifest. It is our opinion that, where the lawyer has no reason to believe that he has been supplanted by another lawyer, it is not only his right, but it might even be his duty to advise his client of any change of fact or law which might defeat the client's testimentary purpose as expressed in the will."

Trusts. A trust is a legal device under which its creator transfers property which he owns or controls into the hands of one or more disinterested third persons known as trustees, and empowers them to carry out one or more specified programs with the trusteed property for a period of time. It amounts to a suspension of ordinary ownership, and in many situations it is intended that not only the income but the principal itself may be drawn upon or exhausted.

Trusts made in the course of personal planning are of two types. One is a trust which takes effect while the creator-owner is alive. It is known as a *living* or *inter vivos* trust. The second is made to take effect upon the death of the creator-owner and is incorporated into a will. Hence its name, *testamentary* trust.

The living trust has an increasing number of uses which are significant to a person in high or even medium income-tax brackets. Some of these trusts are *revocable* or *temporary* in nature, such as one running for a stated term of years. For example, a physician can transfer securities or a lease to such a trust for a period of not less than 10 years, and provide for the payment of the income to others than himself during that period. While the trust is in force, he is relieved of reporting and paying taxes on the earnings of the properties in the trust, at what would be his top personal rates. On the expiration of the period specified in the trust instrument, the principal comes back to him.

A second type of living trust is described as *irrevocable.* Having established it, the physician cannot get the principal back into his own estate. Even the possibility that it could come back to him would probably lose him any income-tax savings while he lived, and would assure taxation of the principal as part of his estate following his death. Such a trust can be authorized to buy securities from the physician's estate, thereby serving as a source of needed cash for the latter.

Some physicians have seen fit to transfer part of their life insurance programs to trusts, and with it sufficient funds to pay premiums. In still other cases the transfer of the insurance has been to members of the family rather than to the estate of the physician, but the trust has a sufficient principal to permit the earnings from it to pay premiums. Insurance so transferred would not be taxable as part of the physician's estate. This device should not be resorted to without careful thought, for it removes the ownership of a valuable and liquid asset from the physician while he lives, and from his estate at his death. Nevertheless it is a practical device under appropriate circumstances, for it results in substantial estate-tax savings.

Through the establishment of irrevocable living trusts or testimentary trusts, a physician can, first, assure expert administration of his estate by one or more experienced trustees, rather than by his wife and children. Second, he can provide flexibility through the so-called "sprinkling trust," a device which permits the trustee to expend (sprinkle) income and even principal for the benefit of those beneficiaries who most need it. Third, the trust permits a minimizing of estate and inheritance taxes through the full or partial avoidance of double taxation of the same assets.

This is one of the most demanding and technical areas in all of legal research or draftsmanship. It calls for a substantial knowledge of estate, inheritance, gift and income taxation, plus a familiarity with partnership and business law, as well as real expertness in the law of trusts. Equally important, it calls for a well developed sense of what is effective and workable, as distinguished from what is theoretical and uncertain. An attorney skilled in the preparation of living or testamentary trusts and in handling associated problems is in a position to render very significant services to a physician client.

Gifts and Contributions. Many physicians are generous to medical schools, universities, churches and other institutions and causes during their lifetimes, or they include gifts to them in their estate planning. A good many overlook some of the broader aspects of the subject, however. One of these is that the making of gifts to individuals can be systematically programmed like almost anything else. Another is that it is frequently desirable to begin systematic gift programs to members of one's family and to others during one's lifetime.

The lifetime federal exemption of $30,000 enjoyed separately by husband and wife, plus the extension of the marital-deduction privilege to gifts made by either to members of their immediate family, provided that the other joins as a matter of acquiescence and signature, permits a very substantial result. Without reducing the lifetime exemption of husband and wife, either parent may make a gift annually up to $6,000 to a child by getting the signature of the other spouse, and such a gift with the double signature of the parents will create no gift-tax liability.

A physician who wishes to make a substantial contribution to a medical school—to give it an income-producing property, for example—can not only reserve a life interest in it for himself, but

can also make the gift in installments covering more than one tax year. He can get a contribution allowance within the maximum applicable to him, which will vary between 10 and 30 per cent of his adjusted gross income. Such a gift would be assigned the fair market value of the property on the date of the gift, adjusted for two factors. One is the fraction of the property contributed in a particular year. The other is the dollar value of the right of occupancy reserved by the physician-giver, which in turn is measured by his life expectancy.

Even where gifts are taxed, the federal rates are much lower than they would be if the gifts were being taxed as part of the estate, and the giver has the satisfaction of seeing his gifts at work. Where no gift tax is involved, the savings are correspondingly more substantial.

Some very frugal observer—possibly a Scot—has favored the deathbed gift even on the basis that the amount of the gift tax due or paid correspondingly reduces the assets of the estate. Undoubtedly there are people who would derive real satisfaction from this kind of terminal victory over the tax authorities.

Marriage and Domestic Problems. These constitute too complex a subject for more than a mention. Suffice it to say, here, that unfortunately there are broken marriages among physicians as well as in any other segment of our population. Property settlements, alimony to a former wife, alimony following a legal separation or an annulment, and trusts or support money for minor children not only have a measurable impact on the earnings of the former husband and father, but also have income-tax implications.

An attorney who is engaged by a physician in a problem involving domestic relations must be in a position to advise on the tax as well as on the other aspects of such a problem. For instance, although to some of you it may seem an extreme example, a marriage on December 31 entitles the happy bridegroom to have his brand new wife join him in a joint federal return for that year. Unless she has income of her own which is substantial enough nearly to equal his, there ordinarily will be a measurable saving to the groom. In making this suggestion, I am not, of course, urging the deferment of marriages to the last day of the calendar year. It is an interesting example, however, of the gains that are available to the foresighted.

Taxes. It has been said that physicians are experts on death, and that attorneys are experts on taxes. We shan't argue the first part of that proposition, but I am sure the average physician is painfully aware that taxes constitute by far the heaviest class of expenditure that is required of him. Typically, his taxes amount to two or even three times his housing costs, which are typically his second largest expenditure. The fact remains that taxes are with us in ever increasing forms and amounts, and that although tax considerations should not control a physician's planning, they must obviously receive serious emphasis and be provided for.

There is no point in assuming a mortgage or other debt, or a life insurance program for which you don't have enough spendable cash after paying taxes. There is, likewise, no point in establishing a testamentary trust with only half as much in it as you intended because the balance was first siphoned off to pay debts, administration and taxes. Even in recent years, I have known of the estates of highly regarded professional men, including physicians, which were in such straightened circumstances that their personal libraries and household furnishings had to be sold for debts.

The law of taxation is not a neat or orderly one. It has been more accurately described, perhaps, as a jungle filled with a tangled undergrowth of regulations. As never before, physicians need expert and continuing advice in the tax aspects of their personal planning and in the preparation of their tax returns. This is not an area for the amateur, unless he is indifferent to the heavy penalties associated with that status.

CONCLUSIONS

Let me see whether, after indulging in some philosophizing and surveying all too quickly some specific areas that are inevitably involved in a physician's personal or estate planning, I cannot make some generalizations which will be helpful as I draw to a close.

First, a physician's planning, whether for himself and his family while he lives, or for his family and his favorite causes after his death, must be as simple and natural as the present state of the law and taxation permit. The law and taxation have both become pretty complex, for they mirror the increasing complexities of life. Thus an even heavier burden is imposed on the planner and his advisors to maintain the ideal of simplicity.

Second, for the same reasons that the patient must be candid with the physician, so must the physician be candid with his attorney. As has been well said, it is futile to attempt planning until the planner is in full charge of all relevant facts.

Third, neither the physician nor the attorney can afford the gamble of taking anything for granted. They must *know* that there is an abstract for certain properties and that deeds have been recorded. They must *check* securities to see who has been designated as the owner or owners. They must have *genuine* and *complete* copies of all instruments and documents which are significant for estate planning. For example, prenuptial or separation agreements may be significant, as may be a decree of divorce or annulment. Wills

under which the physician or his wife have a power of any kind, such as one to appoint what is to be done with certain assets, must be made available by the physician and studied by the attorney.

Fourth, and above all else, common sense and good judgment must be used. Again I am indebted to Mr. Trachtman and the 1964 edition of his ESTATE PLANNING. He says, on page 62:

"Estate planning now has even more of a castle-building quality. Elaborate tax tables are constructed showing to the last dollar what will happen if this or that be done or omitted in planning the estate of one spouse or the other or both. Hoary precedents in the law of wills, trusts and future interests are bandied about, often with an air of discovery and revelation. And yet most all of the plans which are charted so precisely and comprehensively have an air of unreality. They can be knocked apart by any one of hundreds of factors.

"Changes in the form and value of assets and liabilities, changes in the needs and relationships in the family group, and changes in the presumed sequence of deaths can be taken into account by suitable provisions in wills and related instruments. But change in the tax laws is another thing. The marital deduction can be abolished as speedily as it was created. Integration of federal gift and estate taxes, and a federal accessions tax are possibilities. Even within the existing federal tax system much can be done, and it can be done in a sweeping and sudden way. What will be done by the states has to be considered also.

"It is important to keep in mind the main objectives —always to chart a plan which keeps foremost the special needs and personalities and relationships of the interested parties. The practitioner does not deal with symbols H and W and estates of dollars in cash. He is concerned with particular individuals and their families and particular combinations of assets and liabilities. Much of the 'buzzing, blooming confusion' . . . may disappear if taxes are considered after, and not before, the main objectives are analyzed."

I stress common sense because it is sheer delusion to suppose that all contingencies can be foreseen and provided for, or to make the first aim of personal planning the avoidance of taxes. Mr. Trachtman has shown up the foolishness of both those goals in the text from which I have quoted excerpts. Nevertheless, a program of personal planning *realistically conceived, competently developed and conscientiously followed* can substantially *assist* a physician of average or better income in acquiring an adequate competence for himself and reasonable security for his dependents. An attorney or attorneys competent in the areas of law that I have mentioned can play an essential and constructive part in such an endeavor, through a combination of disinterested advice, good drafting, sound judgment and, when the situation calls for it, assembling a team of advisors.

I close with an observation offered by one with much more wisdom than I: In personal planning, as in all else, some areas must be left to an all-seeing and sometimes amused Providence.

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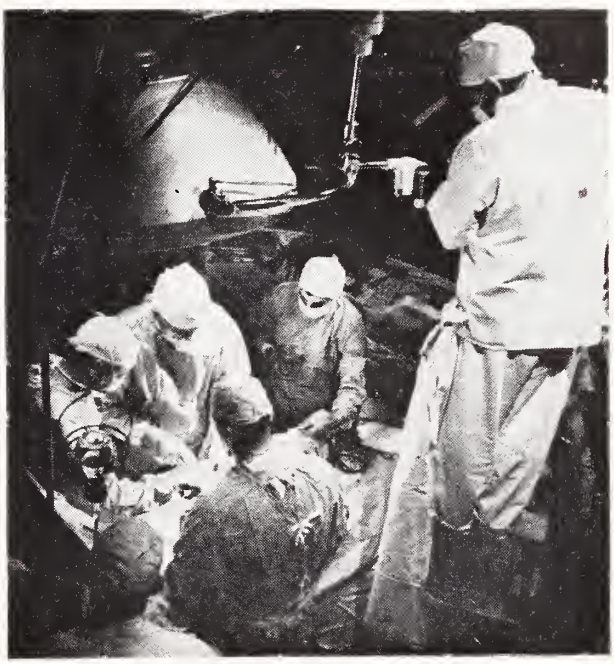

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Scientific Articles

The Closed Hemorrhoidectomy

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THE MULTIPLICITY of types of hemorrhoidectomy probably attests to the fact that the perfect operation has yet to be devised. The following discussion presents the closed method of hemorrhoidectomy, which is a plastic type procedure that provides a skin-lined anal canal and produces excellent results.

Every patient seeking medical attention because of anorectal complaints should undergo a very thorough examination. Careful palpation and inspection of the perianal area and anal canal should be followed by proctosigmoidoscopy. Visualization of the rectum and distal sigmoid can usually be done to a height of 20 centimeters.

Along with a complete history, physical examination and proctosigmoidoscopy, x-ray examination of the colon during and following the injection of barium per rectum should be done before one assumes that hemorrhoidectomy will constitute adequate treatment. This is a most important addition to the customary steps in proctologic diagnosis. When the nature of the examination and the reason for performing it have been explained, the patient readily accepts it.

PREPARATION FOR OPERATION

The patient is admitted to the hospital on the afternoon before surgery is to be performed. That evening, a low-residue or liquid diet is given. Unless the patient is quite sore, it is wise to clean out the bowel prior to surgery, and this can be done with two ounces of castor oil, or more easily with three or four bisacodyl (Dulcolax) tablets. Cleansing enemas are given, one of them on the evening before the operation, and the other just an hour or two prior to surgery. A Fleet enema is usually used. If there is much hair, it is wise to have the anal area shaved.

The patient is placed on the operating table in the jack-knife position. A firm roll is placed under the lower abdomen, and the buttocks are retracted with tape. The tissues adjacent to the anus are scrubbed with Phisohex, and then prepped with tincture of Zephiran or a similar solution.

The anesthesia may be low-spinal or caudal. Sodium Pentothal combined with local anesthesia, is preferred. Xylocaine is used in 1 per cent concentration with epinephrine 1:100,000. About 50-60 cc. is infiltrated in the perianal area, and with the addition of the epinephrine, the oozing so commonly present is markedly reduced. At the completion of the procedure, an additional 15-20 cc. can be injected to prolong the anesthesia.

OPERATION

The major hemorrhoidal complexes usually lie in three areas: the right lateral posterior, the right lateral anterior and the left lateral quadrants. Any of these can be operated first, and no attempt is made to evert the hemorrhoid. A Ferguson-Hill retractor is usually used for exposure, and an elliptical incision is first made around the hemorrhoidal complex (Figure 1). The dissection is then started at the outer edge of the external hemorrhoid, and is carried inward to include the internal hemorrhoid, but a pedicle of mucosa is left. The fibers of the external and internal sphincter muscles are then readily visualized. A Buie clamp is applied to the mucosal pedicle, and the hemorrhoidal mass is excised above the clamp (Figure 2). The pedicle is then ligated with 000 chromic catgut, and the suture is left uncut so that it can be used later to close the edges of the wound. Remaining hemorrhoids are then removed from beneath the skin and mucosal margins together with divisions of the intermuscular septum,

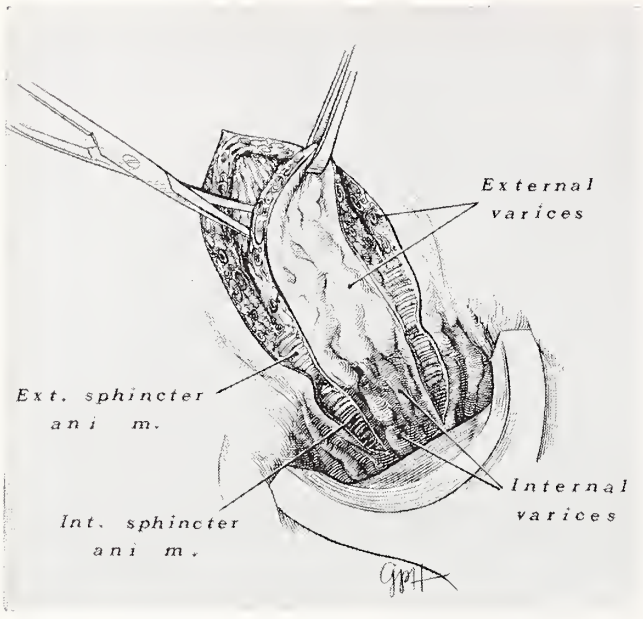

Figure 1. Elliptical incisions are made around the area of maximum deformity.

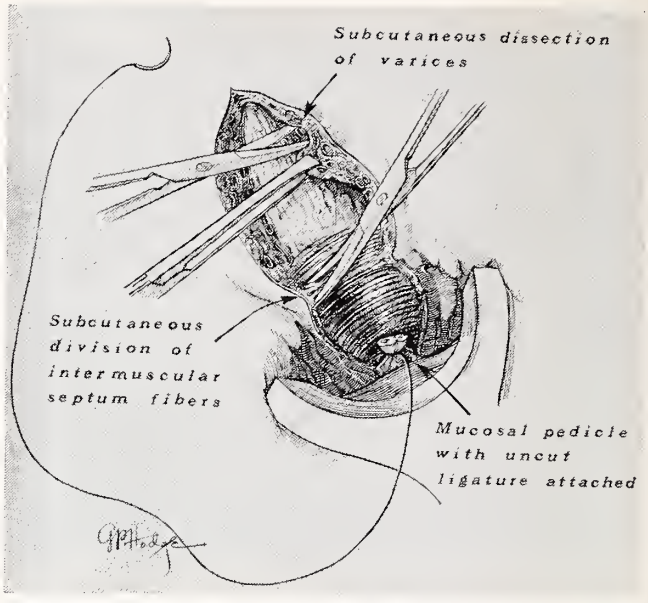

Figure 2. The crushing clamp has been removed, and the pedicle has been ligated. The ligature is retained for closure of the wound.

so that greater mobility of the wound margins can be obtained. Using the original suture, one then places several locking stitches to draw the mucosa and skin into the anal canal. These are secured to the pedicle. The remainder of the wound is then closed with a continuous whip stitch tied loosely at the outer edge (Figure 3). The remaining two major complexes are then done in a similar manner, and the final result is as seen in Figure 4.

At times it may be necessary to make an incision in the midline posteriorly. A superficial sphincterotomy is usually done in that area. If insufficient skin and mucosa are available for primary closure, the wound edges may be stabilized with a running suture of 000 chromic catgut. If any internal hemorrhoids are still present, one removes them by making a short radial incision over them. The varices can then be excised, and the incision is closed with a running stitch. Any remaining skin tags that are present can also be excised in transverse fashion.

At the completion of the procedure, it is not necessary to place a wick or drain in the anal canal. A Penrose drain can be used to prevent the wound edges from adhering, and if a great deal of bleeding has occurred during the operation, an oxycel gauze roll can be inserted. One then places an external pressure dressing firmly against the anal area, and holds it in place by taping the buttocks together.

POSTOPERATIVE CARE

About eight hours after surgery or in the evening following surgery, the external dressings are removed. Hot moist packs are applied to the anal area that night. The next morning, if a drain or oxycel gauze was placed in the anal canal, it is removed.

A general diet is begun as soon as the patient can tolerate it, and fluid intake is encouraged. There is only one dietary limitation. Milk is allowed only in small amounts for in some patients it has a constipating effect.

Morphine sulfate or Demerol is administered hypodermically to control the severe pain that some patients experience. Others require only Equagesic or Darvon compound for pain relief.

Urinary retention is a frequent complication following anorectal surgery. Patients are catheterized when necessary, and if three catheterizations are needed, it is wise to insert a Foley catheter and leave it in place for 48 hours.

Sitz baths are started on the first postoperative day and are continued during the remainder of hospitalization. They should be taken at least three times a day, and they are especially soothing following a bowel movement.

On the first postoperative day, a stool-softener such as dioctyl sodium sulfasuccinate is started. A brand of psyllium hydrophilic mucilloid can also be used to provide a bland non-irritating bulk. During the third or fourth postoperative day, if the bowels have not moved, a saline or tap-water enema is given.

Any type of bland ointment can be used in the operative area following a bowel movement. It is helpful for the patient to place a small wisp of cotton adjacent to the anus to absorb the discharge that is always present for a time postoperatively.

Most patients are discharged from five to seven days after surgery, but the timing depends somewhat on the distance they live from the surgeon's office. They are allowed to use an enema, if neces-

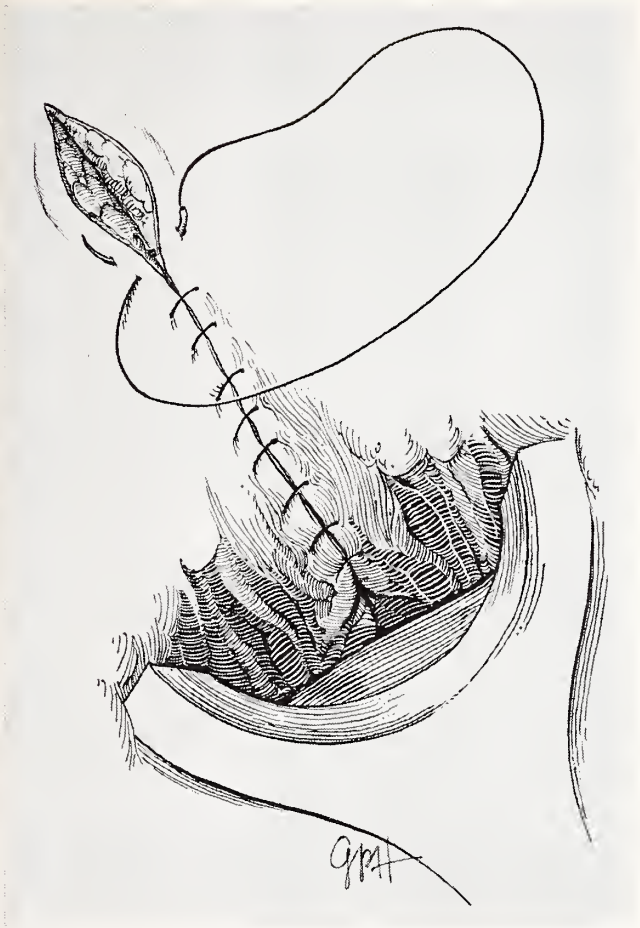

Figure 3. The wound is closed with a continuous whip stitch.

sary, and to continue sitz baths. A stool softener is sent home with each patient, to be used as long as necessary, and he is cautioned to avoid heavy lifting and to use good judgment about all of his physical activities.

After leaving the hospital, the patient is seen in the office after four or five days. One does a digital exam, using the little finger, to make sure no impaction is present. If the patient is doing well, he is seen again at 10- to 14-day intervals until six or seven weeks have elapsed. Then healing is complete.

Patients usually return to work between two and three weeks after surgery, but some need an additional week for recuperation.

COMMENT

This procedure was originated and perfected by the physicians at the Ferguson Clinic, in Grand Rapids, Michigan.[1] By this method the outer two-thirds of the anal canal is relined with true skin.

Postoperative pain is diminished through the use of fine absorbable suture, and through the avoidance of much tissue trauma. Removal of excessive amounts of skin and mucosa, with loss of the intervening bridges, will result in stricture formation.

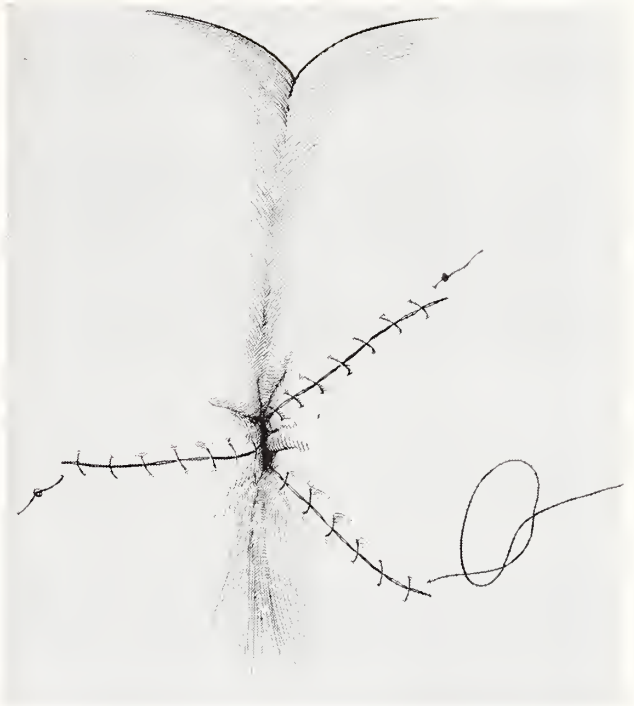

Figure 4. Closed operation completed.

At no time postoperatively is it necessary to dilate the anal canal. The little finger is always used for digital examination until the final visit, when healing is complete. If the proper operation has been performed and if a normal caliber of stool passes through the anal canal, no form of manual dilatation is necessary. No laxatives are given, but a stool-softener can be used to produce a bulky, soft stool. Patients are encouraged to take enemas when necessary.

A closed type hemorrhoidectomy is used because the wounds heal faster and discomfort is lessened. Postoperative visits are required less frequently, and the anal canal has a natural pliability. Complete closure of the skin incisions is not followed by cellulitis, abscess formation or other complications.

SUMMARY

The plastic type of hemorrhoidectomy which has been described gives excellent results. A complete preoperative work-up is done, and the postoperative care is simple and effective. All the hemorrhoidal varices are removed, and the result is a skin-lined anal canal.

ACKNOWLEDGMENT

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Spontaneous Rupture of the Spleen in Leukemias

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SPONTANEOUS RUPTURE of the spleen is a rare and usually fatal complication of leukemia. Although case reports of this catastrophe appear from time to time in the literature, little information on it is available from the current textbooks or monographs. This is a report on three leukemia patients with spontaneous rupture of the spleen who were observed within a period of three years at the Iowa City Veterans Administration Hospital.

CASE REPORTS

Case 1. E.M., a 70-year-old white man, was admitted to the Iowa City Veterans Administration Hospital on September 8, 1964, with a one year history of weakness, drowsiness and pain in the legs. One month before admission he was found to be anemic, and was treated with vitamin B_{12} injections and iron without benefit. Subsequently six blood transfusions produced marked improvement in his clinical status. The patient had a long history of rheumatoid spondylitis. In 1952, he received 600 r in air of x-ray therapy to the lumbar spine, but there had been no exposure to leukemogenic chemicals.

His physical examination on admission was essentially negative, except for pallor and apparent weakness. The spleen, liver, and lymph nodes were not palpable. The blood findings were as follows: hemoglobin 9.0 Gm./100 ml.; hematocrit 27 per cent; red blood cell count, 3.19 million/cu. mm.; reticulocytes, 0.1 per cent; platelet count, 24,000/cu. mm.; white blood cell count, 3,000/cu. mm., with 30 per cent polymorphs and 58 per cent lymphocytes. A few immature red cells but no immature white cells were seen in the peripheral smear. A sternal marrow aspirate showed marked erythroid hyperplasia, with a myeloid-erythroid ratio of 1/2.7. The red cell precursors were predominantly in the early basophilic stages, showing frequent giant, multinucleated and polypoid forms. The more mature red cells showed prominent megaloblastic features. The red cell precursors also showed cytoplasmic granules strongly positive with PAS stain. The white cell precursors were unremarkable. Blood chemistries showed bilirubin total, 1.4 mg./100 ml., direct, 0.45 mg./100 ml.; and serum iron, 170γ per 100 ml. A gastric analysis was positive for free acid.

Clinically, this case was diagnosed as acute erythremic myelosis, and was treated only with blood transfusions. On October 10, 1964, the patient complained of sudden abdominal pain, vomited coffee-ground material and died shortly thereafter.

At autopsy there was approximately 500 ml. of fresh blood in the peritoneal cavity. The spleen weighed 500 Gm., and showed several jagged lacerations from 0.5 to 1.0 cm. deep. There were also scattered subcapsular infarcts. The liver weighed 1,850 Gm., and showed reticular congestion. The bone marrow was hyperplastic, with overgrowth of immature myeloid cells. Similar infiltrations were seen in the sinusoids of the liver and spleen. The stomach showed hemorrhagic gastritis.

Case 2. T.B., a 79-year-old white man, was admitted to the Iowa City VA Hospital on September 17, 1964, with a history of poor health for several months. Two days before admission he had developed sudden left chest pain, and had become pale and sweaty. His systolic blood pressure had been found to be below 100 mg. Hg. He was given digitalis for atrial fibrillation, and referred to the Iowa City VA Hospital.

Physical examination showed a well nourished, pale and confused patient. The blood pressure was 120/70 mm. Hg, and the temperature was 101.8° F. The heart was not enlarged. The heart rate was 120/minute, and the rhythm was totally irregular. Fine moist rales were heard at the right lung base. The abdomen was protuberant and slightly tympanitic. The bowel sounds were normal. There was 2+ pedal edema.

Laboratory examination showed a hemoglobin of 7.2 Gm./100 ml.; and a hematocrit of 25 per cent. The white blood cell count was 154,000/cu. mm., with 2 per cent myeloblasts, 4 per cent promyelocytes, 24 per cent myelocytes, 22 per cent metamyelocytes, 14 per cent bands, 31 per cent polymorphs and 3 per cent lymphocytes. A few nucleated red blood cells were also seen. The

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platelet count was 532,000/cu. mm., and reticulocytes 10.6 per cent A chest x-ray showed cardiomegaly with pulmonary congestion. An EKG was interpreted as showing atrial fibrillation and possible old inferior myocardial infarction.

The patient was treated for acute myocardial infarction. On the day following admission, he suddenly became hypotensive and died.

Autopsy showed 2,000 ml. of blood in the peritoneal cavity. The spleen weighed 1,000 Gm., and showed a large rupture in the upper pole, which was the site of a large infarct. The liver weighed 2,250 Gm., and appeared pale. Microscopic examination showed infiltration of myelocytes and metamyelocytes in the spleen, liver and kidneys. There had been no recent myocardial infarction.

Case 3. R.M., a 70-year-old white man, was first admitted to the Veterans Administration Hospital, Iowa City, in May, 1959, for treatment of benign prostatic hypertrophy. His hemoglobin was 9.1 Gm./100 ml., and his leukocyte count was 5,600/cu. mm., with a normal differential count. Persistent urinary tract infection and azotemia followed transurethral resection of the prostate.

During his subequent four hospital admissions, the patient was observed to be increasingly anemic. Initially, anemia was attributed to the renal disease and blood loss. Reticulocyte counts were only moderately elevated. Coombs' tests, direct and indirect, were negative. Leukocyte counts ranged from 3,000 to 5,000/cu. mm., except during episodes of acute bacterial infection when occasional leukocyte counts of as much as 36,000/cu. mm. were recorded. Occasional myelocytes and metamyelocytes were noted in blood smears. Platelets were moderately reduced. The first examination of the bone marrow, in April, 1961, showed marked granulocytic hyperplasia with less striking erythroid hyperplasia. By June, 1961, the aspirate of bone marrow showed a picture typical of chronic myelocytic leukemia. The patient received no treatment for leukemia other than frequent transfusions of blood.

The patient's final admission to this hospital, in November, 1961, was occasioned by progressive weakness and fatigability, along with congestive heart failure. The latter was attributed to arteriosclerotic heart disease and chronic anemia. The spleen was then palpable 1 cm. below the left costal margin. The hemoglobin was 3.9 Gm./100 ml. The leukocyte count was 5,500/cu. mm. There were small numbers of myelocytes and metamyelocytes, and three to seven normoblasts per 100 leukocytes in the peripheral blood smears. The bone marrow again was typical of chronic myelocytic leukemia, and nucleated red cells were reduced. By early February, 1962, leukocytosis had replaced the previous leukopenia, and the counts were on the order of 30,000/cu. mm. A differential leukocyte count of peripheral blood at that time showed 2 per cent myeloblasts, 3 per cent promyelocytes, 3 per cent myelocytes, 5 per cent metamyelocytes, 11 per cent nonsegmented neutrophils and 57 per cent segmented neutrophils. Terminally, a leukocyte count of 150,000/cu. mm. was reported. The spleen had enlarged to 5 cm. below the left costal margin, and it was tender when palpated.

On July 7, 1962, the patient was found in shock. The abdomen was distended, and there was some tenderness in the epigastrium. An electrocardiogram was interpreted as showing evidence of acute myocardial infarction, and the catastrophe was attributed to that condition. He was treated with oxygen and vasopressors to no avail, and he died 1½ hours later.

Postmortem examination showed rupture of the spleen as the immediate cause of death. The spleen weighed 2,300 Gm., and contained several acute hemorrhagic infarcts, some of them subcapsular. There was a single deep laceration on the medial inferior surface. The peritoneal cavity contained 1,200 ml. of unclotted blood. The heart showed coronary arteriosclerosis and old posterior infarction. There had been no recent infarction of the heart. The kidneys showed the changes of chronic pyelonephritis. Microscopic sections showed a picture of chronic myelocytic leukemia in the bone marrow. There was striking generalized infiltration of the hepatic parenchyma and sinusoids with immature myeloid cells. The splenic pulp was diffusely invaded and almost completely obscured by large numbers of myelocytes. There were isolated ulcers of the jejunum and ileum, with infiltration of the submucosa and muscularis by leukemic cells. No duodenal ulcer was found.

DISCUSSION

Approximately 20 cases of spontaneous rupture of the spleen in leukemias have been reported. Hynes and Silverstein[1] recently reviewed most of those cases, and they added two cases of their own. Of the cases reported, nine had occurred in acute leukemias—four in acute myelogenous leukemia; three in acute lymphocytic leukemia; one in acute blastic crisis;[2] and one in a case of unspecified type. Six cases had occurred in patients with chronic leukemias—three in chromic lymphocytic leukemia;[3, 4] and three in chronic myelogenous leukemia. The type of leukemia had not been specified in some others.[5-7]

The first case reported in this paper is of special interest. Although the bone marrow findings suggested a pure form of acute erythremic myelosis, at postmortem examination the bone marrow, liver and spleen showed predominantly young myeloid cells. A review of the larger and more recent series of acute Di Guglielmo syndrome[8-10] failed to reveal any previous patient who had received irradiation, nor were there any reports of splenic rupture. The addition of two cases of splenic rupture in chronic myelogenous leukemia brings the total reported to five.

Since spontaneous rupture of the spleen is rare in leukemia, it is seldom recognized clinically.

However, early diagnosis and splenectomy in a few cases have prolonged life, especially for chronic leukemia patients.[11, 12]

SUMMARY

One case of spontaneous splenic rupture in acute Di Guglielmo syndrome and two cases in chronic myelogenous leukemia have been reported. Splenic rupture is still a rare complication in patients with leukemias.

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Androgenic Disorders of the Female

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THE ANDROGENIZED WOMAN is, in a sense, her own bioassay. Her clinical manifestations reflect the potency of the androgen to which she has been exposed, the duration of her exposure, and the genetically-determined sensitivity of her hair follicles, sebaceous glands and other susceptible tissues to the androgen.

Viewed in this light, it is not difficult to see that two women exposed to the same androgen in equal amounts and for similar periods of time can develop significantly different degrees of hirsutism because of differences in the sensitivities of their hair follicles, or that one woman with acne and anovulatory cycles of prolonged duration can have an androgenic disorder as does the woman with amenorrhea and progressive virilization of a few months' duration.

Having defined the broad clinical spectrum of these disorders, one can turn his attention to their pathogenesis, differential diagnosis and management. The classical and overt virilization syndromes will not be emphasized because of their relative rarity. Instead, principal attention will be given to the simple hirsute group—women with acne, hirsutism, sometimes slight clitoral hypertrophy and usually, but not invariably, a menstrual aberration. In the author's experience this group comprises over 95 per cent of the androgenized women seen in physicians' offices.

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EXOGENOUS ANDROGENS

The first thing to do, on seeing a hirsute woman, is to exclude exogenous androgens. These can be a known androgen like testosterone, an anabolic agent like Nilevar or Halotestin, a "shotgun" mixture containing an androgen with vitamins and minerals, or a progestational agent like norethindrone which has androgenic capabilities.

As a general rule, except for selected patients with metastatic breast carcinoma, testosterone is contraindicated in the female. The newer progestogens can be substituted for testosterone with equal therapeutic efficacy for conditions such as mastalgia, endometriosis and dysmenorrhea, among other conditions, without the adverse androgenic side effects.

When indicated, anabolic agents should be used with caution, because the pharmaceutical chemist has not been able completely to obviate the androgenic effect in the steroid molecule while retaining the anabolic effect.

"Shotgun" mixtures are to be shunned. A physician can write appropriate prescriptions for the medications that he desires to use in combinations.

Norethindrone (Norlutin) or its acetate (Norlutate), when used for a prolonged time in daily doses equaling or exceeding 10 mg. can cause acne and hirsutism in a few women. They generally do not occur when these progestational agents are used in 2 or 2.5 mg. doses, as in the contraceptive pills Ortho-Novum, Norinyl and Norlestrin.

ENDOGENOUS ANDROGENS

Under physiologic conditions, the testes produce chiefly testosterone, the adrenals produce hydrocortisone and aldosterone, and the ovaries produce

estrogen prior to ovulation and estrogen and progesterone afterward. During pregnancy the placenta secretes increasing amounts of estrogen and progesterone. At the same time, other steroid hormones are produced as minor end-products or as biosynthetic intermediates which may escape in small quantities into the blood stream.

Figure 1 shows the major biosynthetic pathways of the adrenal, and Figure 2 demonstrates the important pathways in the ovary, testis and placenta. Close examination indicates a qualitative hormonal similarity of these glands as regards the sex steroids. The big difference, normally, is a quantitative one of end-product production.

In a pathologic state such as hyperplasia, on the other hand, alterations in enzymatic activity resulting from an intrinsic effect or from an extrinsic effect, like a change in pituitary trophic hormone secretion, can lead to steroid production that is abnormal either in type and or in amount for the gland involved. For example a congenital deficiency in the enzyme which converts 17-hydroxy progesterone to 11-desoxycortisol (Figure 1) in the adrenal can result in a hydrocortisone deficiency. This decrement removes the braking effect on ACTH secretion. The increased pituitary hormone stimulation of the adrenals causes an overproduction of the blocked 17-hydroxy progesterone, which by virtue of its metabolism to androgenic hormones causes virilization, and subsequently menstrual dysfunction. Theoretically, an enzyme block in the ovarian conversion of testosterone to estradiol (Figure 2) can cause androgenic hyperplasia of the ovaries, and functionally can give them the hormonal characteristics of the testes.

Neoplasms, on the basis of their intrinsic enzyme capabilities, can produce steroid hormones that are abnormal, either in type or amount, for their glands of origin. Usually this steroid production is independent of pituitary hormone control. Feminizing or masculinizing tumors of the ovaries or adrenals are well known. Some testicular tumors can feminize; adrenal tumors can produce an excess of glucocorticoids, as can some adrenal rest tumors of the ovary.

Time should be taken at this point to indicate that the placenta is a special steroid gland, first in that it may have an incomplete biosynthetic capability requiring cholesterol as a starting ma-

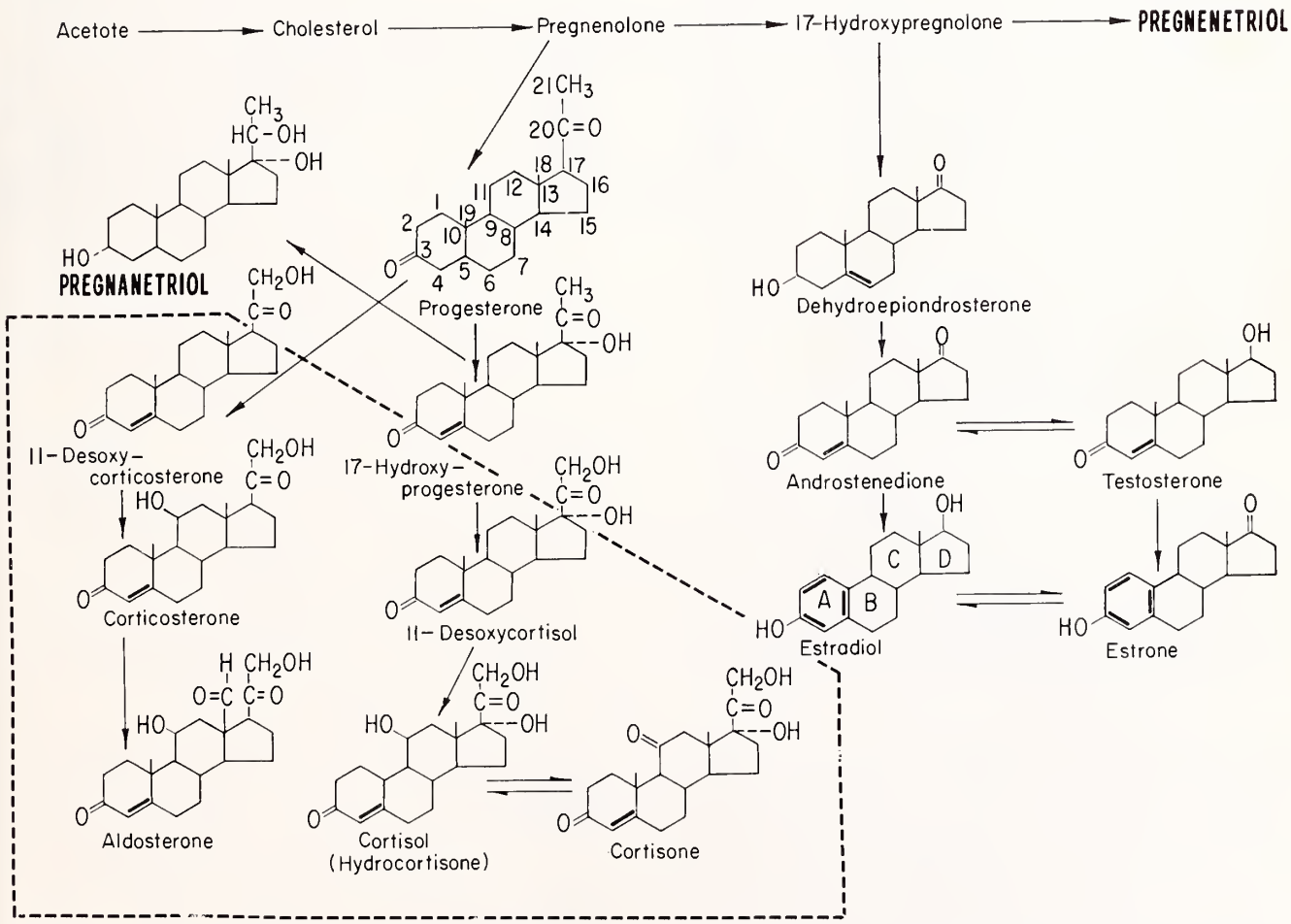

Figure 1. The major adrenal biosynthetic pathways. Those enclosed within the broken line are, with a rare exception, limited to the adrenal gland. The other pathways are common to all steroid glands. Pregnanetriol and pregnenetriol (heavy type) are unique metabolites in congenital adrenal hyperplasia. The numbers correspond to the carbons in the steroid molecule. The progesterones, glucocorticoids and mineralocorticoids possess 21 carbons. Loss of the C 20 and 21 carbons gives the androgens with 19 carbons. Loss of the C 19 carbon and aromatization of the A ring produce the estrogens with 18 carbons.

terial for the synthesis of progesterone,[1] and requiring dehydroepiandrosterone from the fetal adrenal for the synthesis of estriol.[2] However, the major portions of estradiol and estrone appear to be synthesized via the usual pathways from an acetate precursor, as in the other steroid glands. Second, there has been no report of a placental androgenic tumor, or an unequivocal study showing that placental androgenic intermediates can be over produced in a hyperplastic process. It seems more likely that the occasional case of temporary hirsutism occurring during pregnancy is the result of increased ovarian androgen production mediated by chorionic-gonadotrophin stimulation.

17-KETOSTEROIDS

In the normal female, the 17-ketosteroids are chiefly derived from the adrenals, with a minimal ovarian contribution. In the normal male, a more significant amount (about one-third) originates in the testes. The usually quoted range for females is 5-15 mg. per 24 hour urine, and the male values are about 5 mg. higher. Clinical experience, however, has indicated to the author that a normal value in the female does not exceed 10 mg. when compensation has been made for obesity by reporting the milligrams of 17-ketosteroids per gram of urinary creatinine.

Figure 3 lists the major 17-ketosteroids measured in the urine under the column "Metabolites." It is apparent that most of the 17-ketosteroids have several common precursors.

Testosterone, which is not a 17-ketosteroid (see its formula in Figure 1 or 2), is the most potent androgen. An estimated 50 per cent of it is metabolized to androsterone and etiocholanolone,[3] and the 17-ketosteroids reflect its secretion only indirectly. It is not difficult to see that although a 4

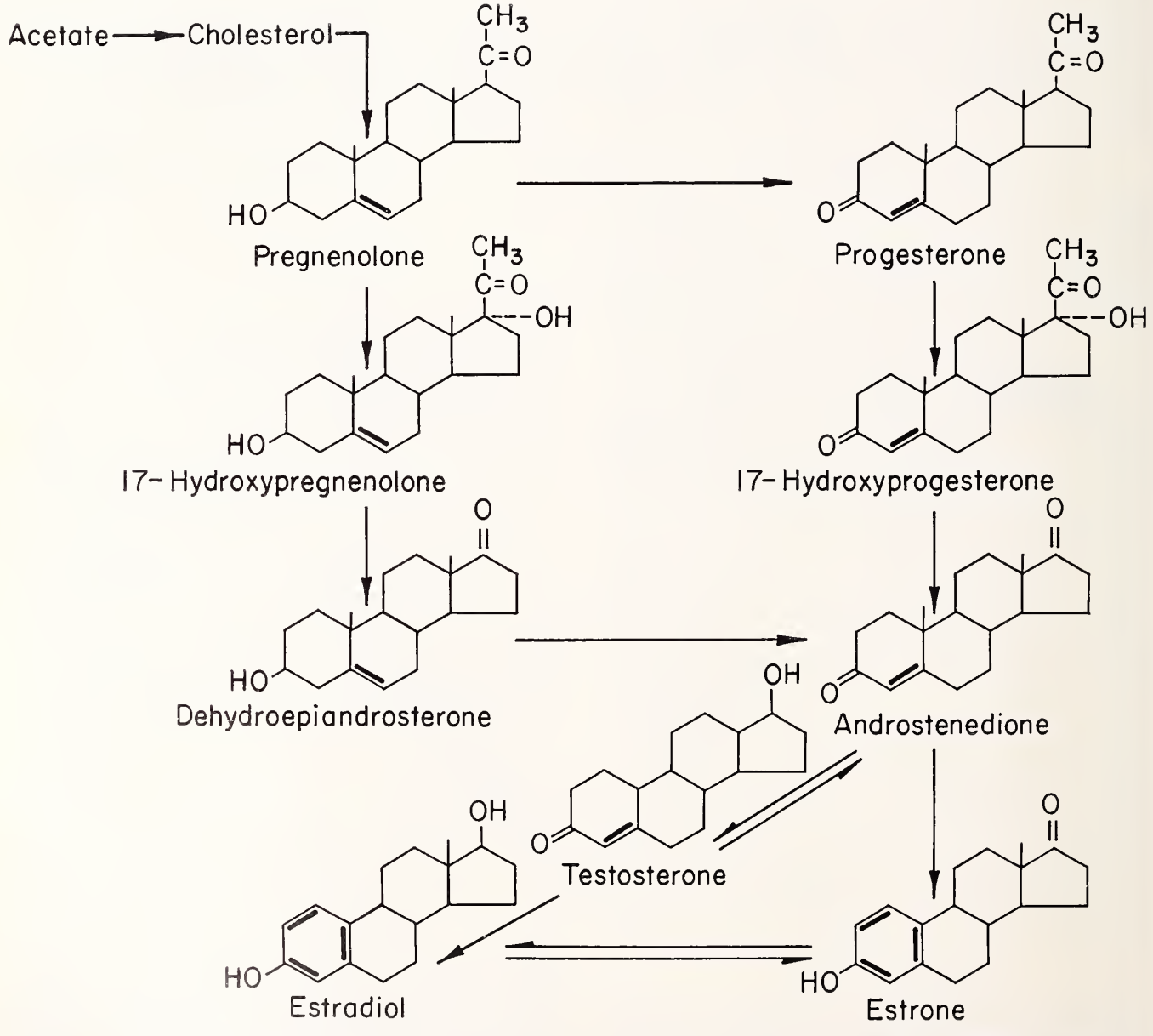

Figure 2. The major biosynthetic pathways of the ovaries, testes and placenta. See the text regarding possible exceptions for the placenta.

mg. increase in testosterone secretion could induce significant androgenic effects in the female, a 2 mg. rise in urinary 17-ketosteroids would not be readily evident in the reported laboratory value.

Testosterone, the chief end-product of testicular biosynthesis, is merely an intermediate product in the ovaries, adrenals and placenta. However in certain ovarian pathologic states (androgenic tumors and some polycystic ovary disorders), it is produced in significant amounts and released into the circulation.

Androstenedione and dehydroepiandrosterone, which are 17-ketosteroids structurally (see formulas in Figure 1 or 2), are androgenically about 5 per cent as potent as testosterone.[3] Normally, except for the adrenal secretion of dehydroepiandrosterone, both hormones are intermediates in the biosynthetic pathways of the steroid glands. Each can be metabolized to the urinary 17-ketosteroids androsterone and etiocholanolone, and dehydroepiandrosterone can be excreted unchanged as well. As a result, their production is reasonably reflected in the urinary 17-ketosteroid production. In some pathologic conditions of the adrenals or ovaries, a considerable excess of either or both is produced.

By virtue of its metabolic conversion to androstenedione 17-hydroxyprogesterone is androgenic and contributes to the total 17-ketosteroids. 17-hydroxyprogesterone is also metabolized to biologically-inactive pregnanetriol (Figure 3) which is not a 17-ketosteroid. However, measuring it separately is of considerable diagnostic value in the more common forms of congenital adrenal hyperplasia.

A weak androgen, 11-hydroxyandrostenedione, is converted to the 11-hydroxy or 11-keto derivatives of androsterone and etiocholanolone. Except possibly for some adrenal rest tumors of the ovary, this precursor is essentially of adrenal origin. It may be a clinically significant hormone in androgenic variants of Cushing's syndrome because of its massive secretion.

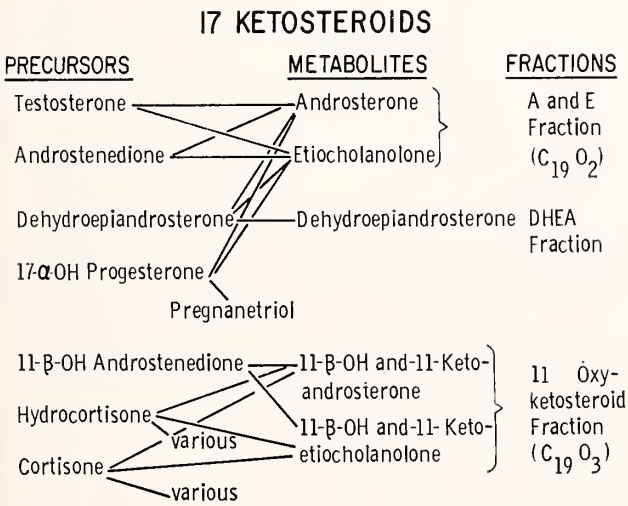

Figure 3. Some of the major androgenic and nonandrogenic precursors and their 17-ketosteroid metabolites. Elevation of the A and E fraction indicates more potent precursors, the production site of which is unknown. Elevation of DHEA fraction of ten implicates the adrenals. Elevated 11-oxyketosteroids almost always point to the adrenals.

Interestingly enough, the glucocorticoids hydrocortisone and cortisone make a small contribution to the weakly androgenic 11-oxy, 17-ketosteroids.

Having seen that the 17-ketosteroids are derived from several common precursors which may arise from more than one gland, that non-androgens contribute to the 17-ketosteroids, and that the most potent androgen, testosterone, exerts a significant clinical effect while adding little to the total 17-ketosteroids, one can understand why there are differences of opinion regarding the clinical value of this determination.

Some years ago it was generally thought that the 17-ketosteroids accurately reflected a patient's androgenic hormone status. Indeed it was so deeply ingrained in the minds of many medical students that on presenting a very virilized young woman to a group of young physicians, the author was told that the patient was normal because her 17-ketosteroid measurement was 12 mg. This occurred in spite of the fact that any reasonable layman, with no more medical education than a cursory glance at a Boy Scout's first aid manual, would have respected his visual findings and quickly drawn the opposite conclusion.

Today the pendulum has swung in the opposite direction, and 17-ketosteroid measurements are generally regarded as having little value. This has led to fractionation of the 17-ketosteroids (Figure 3) and to sophisticated assays designed to measure the precursor hormones in the urine or plasma. Although these refined technics have been more informative, some questions of pathogenesis and diagnosis have remained unresolved. It has been found that one must measure the precursor androgens or 17-ketosteroid fractions while differentially stimulating and suppressing the steroid-producing glands.

These experimental laboratory technics are not generally available to the clinician. Nevertheless he can gain considerable diagnostic information by differentially suppressing the adrenals and ovaries while using the standard 17-ketosteroid determination. This approach, which greatly enhances the value of the assay, will be dealt with in detail in the section on differential diagnosis.

ANDROGENIC SYNDROMES

The androgenic syndromes are presented schematically in Figure 4. This classification is based on the assumption that androgenicity in the female, when an exogenous androgen source has been excluded, is the result of dysfunction in either the ovaries or the adrenals. The dysfunction can be the result of a hyperplasia or a neoplasia. The former is usually under the influence of the appropriate pituitary trophic hormones, whereas the latter is usually an independent or autonomous entity.

Thumbnail sketches of these syndromes, with their salient clinical and laboratory features, are presented below. It is recognized that these disorders do not include the occasional case of hirsutism resulting from medications like Dilantin, or from clinical entities like porphyria, Chiari-Frommel syndrome, chronic debilitating diseases and the post-menopausal phenomena, among others. However, the author believes that the hirsutism is mediated through disturbances of the hypothalamo-pituitary-adrenal or ovarian axes, and excess androgen production by the involved steroid-hormone gland. For example, it can be produced by the ovarian stroma under excess FSH stimulation in the post-menopausal female, or by the adrenals in the woman with galactorrhea, amenorrhea and the utero-ovarian atrophy of the Chiari-Frommel syndrome.

I. *Congenital Adrenal Hyperplasia*

Onset: Intrauterine, but occasionally manifesting in later life.

Androgenicity: Severe hirsutism and virilization; ambiguous external genitalia (clitoral enlargement and labial fusion); advanced bone age.

Menstruation: Usually primary amenorrhea.

Androgen: Few dehydroepiandrosterone; the rest probably androstenedione.

17-ketosteroids: 50 to 80 mg.

Pregnanetriol: Elevated (normal <2 mg. per 24 hour urine).

Other: Familial; may occur in male (enlarged phallus at birth) or in female siblings—an uncommon disorder.

Biochemistry: The enzyme (21-hydroxylase) block in the conversion of 17-hydroxy progesterone to 11-desoxycortisol is the most common form, and it has been described previously. Less common is the block in hydroxylation of the 11 carbon (Figure 1) which causes the same clinical and laboratory features plus hypertension. Least common is a block in the conversion of pregnenolone to progesterone (Figure 1) resulting in excess dehydroepiandrosterone secretion and elevation of the 17-ketosteroids, as well as a rise in pregnenetriol rather than pregnanetriol.[4] If any of these enzymatic blocks is severe enough to cause a significant hydrocortisone and aldosterone deficiency, a salt-losing form of the syndrome is seen.

II. *Virilizing Adrenal Tumors*

Onset: Anytime.

Androgenicity: Moderate hirsutism and virilization.

Menstruation: Hirsutism precedes the menstrual disorder.

Androgen: Dehydroepiandrosterone is the most common.

17-ketosteroids: >80 mg.

Pregnanetriol: Elevated, but reflecting an overall increase in steroid production, rather than a specific enzyme block as in I.

Other: Uncommon; due to adenoma or carcinoma.

III. *Cushing's Syndrome With Virilization*

Onset: Anytime.

Androgenicity: Variable.

Menstruation: Menstrual disorder follows the glucocorticoid effect.

Androgen: 11-hydroxyandrostenedione or androstenedione.

17-ketosteroids: Moderately elevated.

Pregnanetriol: Elevated, as in II.

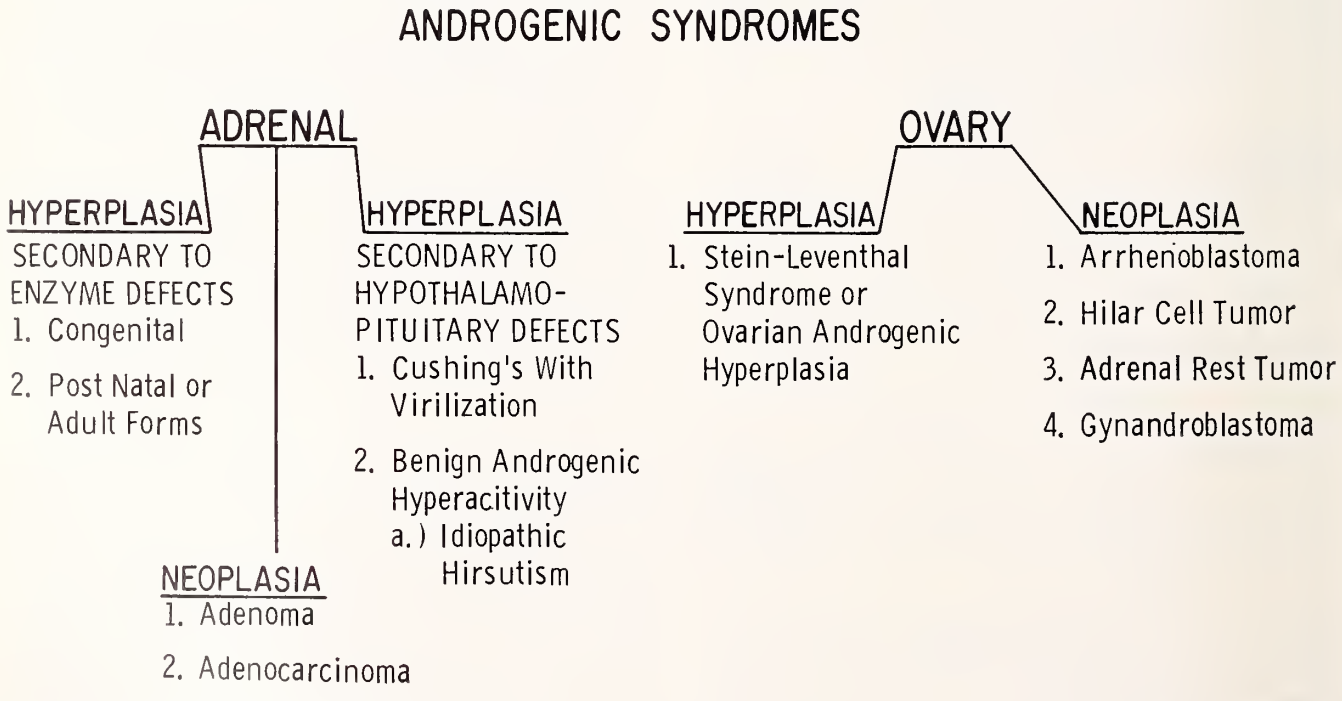

Figure 4. A classification scheme based on the origin of excess androgens from the ovary or the adrenal as a result of either hyperplasia or neoplasia.

Other: Tumor or hyperplasia; the increased glucocorticoid production elevates the urinary 17-hydroxysteroids much above 10 mg. per day, provided one compensates for obesity by regarding 0.13 mg. of 17-OH steroids per kilogram of body weight as normal. Cushing's syndrome is an uncommon disorder, and only about 25 per cent of such patients show virilization.

IV. *Benign Androgenic Hyperplasia of the Adrenals*

Onset: Usually at puberty.

Androgenicity: Mild to moderate hirsutism.

Menstruation: May be normal; hirsutism precedes the menstrual disorder.

17-ketosteroids: Elevated into the teens or twenties.

Pregnanetriol: Normal.

Other: Familial hirsutism appears to be a quantitative variant. The pathogenesis is not clear. It may result from an increased secretion of androgen secondary to a stress-induced rise in ACTH production; it is a rather frequent cause of hirsutism.

V. *Ovarian Virilizing Tumors*

Onset: Anytime.

Androgenicity: Severe hirsutism, variable virilization.

Androgen: Testosterone.[5]

17-ketosteroids: Elevated into the teens or twenties.

Pregnanetriol: Normal.

Other: An adrenal rest tumor may secrete glucocorticoids and elevate the 17-hydroxysteroids—an uncommon disorder.

VI. *Ovarian Androgenic Hyperplasia (Stein-Leventhal Syndrome)*

Onset: Puberty.

Androgenicity: Acne; absent-to-moderate hirsutism; occasional clitoral hypertrophy.

Menstruation: Occasional ovulation; dysfunctional uterine bleeding, oligomenorrhea or amenorrhea.

Androgen: Androstenedione, dehydroepiandrosterone, testosterone.

17-ketosteroids: Elevated into the teens or twenties.

Pregnanetriol: Normal.

Other: The term "polycystic ovaries" was avoided because this gross appearance can be seen in women on exogenous testosterone and in about 50 per cent of women in whom the adrenals are the androgen source. Also it appears that the ovaries need not be grossly enlarged. It is the other relatively frequent cause of female hirsutism.

Biochemistry: In vitro and *in vivo* studies indicate that relative enzyme blocks may occur in this disorder, with mild to moderate elevations of one or more of the three androgens listed above.[6, 7, 8] These blocks (Figure 2) involve the conversion of androstenedione to testosterone, or dehydroepiandrosterone to androstenedione, or testosterone to estradiol. Plasma androgen assays indicate, at least in some cases of simple hirsutism, that both the adrenals and ovaries may contribute to the excess production of androgen.

DIFFERENTIAL DIAGNOSIS

Outlined below is a diagnostic plan for evaluating all androgenized females. It is designed primarily for the differential diagnosis of the more common and mild androgenic disorders resulting from benign androgenic hyperplasia of the ovaries or adrenals.

1. Collect one or preferably two 24-hour control urines for 17-ketosteroid, 17-hydroxysteroid and pregnanetriol measurements. Other studies that seem indicated, such as a PBI, a glucose tolerance test, etc., should be done at this time.

2. After collecting the baseline urines, give dexamethasone, 2 mg. (four 0.5 mg. tablets) every eight hours for three days. Then reduce the dose to 0.25 mg. (½ of a 0.5 mg. tablet) every eight hours until the diagnostic studies have been completed. A 24-hour urine is collected on the fourth or fifth day for a repeat evaluation of the 17-keto, 17-OH steroids and pregnanetriol. This determination is done when the patient is on a physiologic maintenance dose of dexamethasone and when the drug's contribution to the 17-ketos and 17-OH's is minimal. Therefore, the reported values reflect only endogenous hormone excretion.

3. Without interrupting the dexamethasone maintenance, give stilbestrol, 1 mg. every 12 hours for nine days, to suppress the ovaries. This is the ovarian equivalent of the cortisone test for the adrenals.[9] On the eighth day after starting the estrogen, collect the last 24-hour urine for 17-ketosteroid measurement. Analysis of this urine for the 17-hydroxysteroids and pregnanetriol is not required, for the pathologic conditions associated with their elevation are independent of ovarian function. Cessation of the estrogen often results in withdrawal bleeding from the uterus.

The test results are shown graphically in Figure 5, and are interpreted as follows:

1. A marked elevation of the 17-ketosteroids and pregnanetriol which are both fully suppressed by dexamethasone indicates congenital adrenal hyperplasia.

2. A moderate elevation of the 17-ketosteroids, with a normal pregnanetriol that suppresses completely (below 3 mg. per 24 hour urine) makes the diagnosis of benign androgenic hyperplasia of the adrenals most probable.

3. A marked elevation of the 17-ketosteroids which is not suppressed by dexamethasone points to a virilizing adrenal tumor.

4. A virilizing Cushing's syndrome shows a moderate to marked elevation of both the 17-ketosteroids and 17-hydroxysteroids. Hyperplasia or tumor can be evaluated on the basis of the ability of dexamethasone to suppress the urinary steroids.

5. When moderately elevated 17-ketosteroids are incompletely suppressed to 7-11 mg. by dexamethasone and cannot be suppressed further by

stilbestrol, the question of an androgenic ovarian tumor arises. If a well defined mass is not felt, culpotomy or culdoscopy should precede abdominal laparotomy.

6. Moderately elevated 17-ketosteroids which dexamethasone reduces to the range of 6 to 10 mg. and which stilbestrol further suppresses to less than 3 mg. constitute presumptive evidence for ovarian androgenic hyperplasia. Ovarian size is then evaluated more completely by gynecography, culpotomy or culdoscopy. If dexamethasone suppresses the 17-ketosteroids into the range of 4 to 6 mg., and if a further drop to below 3 mg. occurs with estrogen, one should think of an androgenic disorder with a major adrenal and minor ovarian component.

TREATMENT OF THE LESS COMMON DISORDERS

Congenital adrenal hyperplasia is diagnosed on the basis of its clinical features, and of high 17-ketosteroid and pregnanetriol values which are fully suppressed by the cortisone test. Treatment consists of continuous suppression of the adrenals with hydrocortisone or a synthetic analog. Mineralocorticoid substitution is required in the salt-losing form. Patients who are growing children are best managed by a pediatric endocrinologist, but one should not forget that this disorder can develop occasionally in an adult woman, as secondary amenorrhea and progressive hirsutism.

Virilizing adrenal tumors are diagnosed on the basis of exceedingly high 17-ketosteroids which the cortisone test does not suppress. Intravenous pyelograms and presacral air insufflation help to verify the diagnosis. The treatment is surgical.

Cushing's syndrome with virilization is indicated by its clinical features, although the catabolic glucocorticoid effects may be modified by the anabolic androgens. There are elevations of the 17-ketosteroids and 17-hydroxysteroids. Suppression by the cortisone test depends on whether the disorder is hyperplastic or neoplastic in origin. The former is usually treated by bilateral adrenalectomy, and the latter by excision of the tumor. All suspected cases should be referred to a competent internist, who can do more sophisticated and conclusives tests, as well as manage the patient during and after surgery to avoid an Addisonian crisis.

Virilizing ovarian tumors cause only a moderate

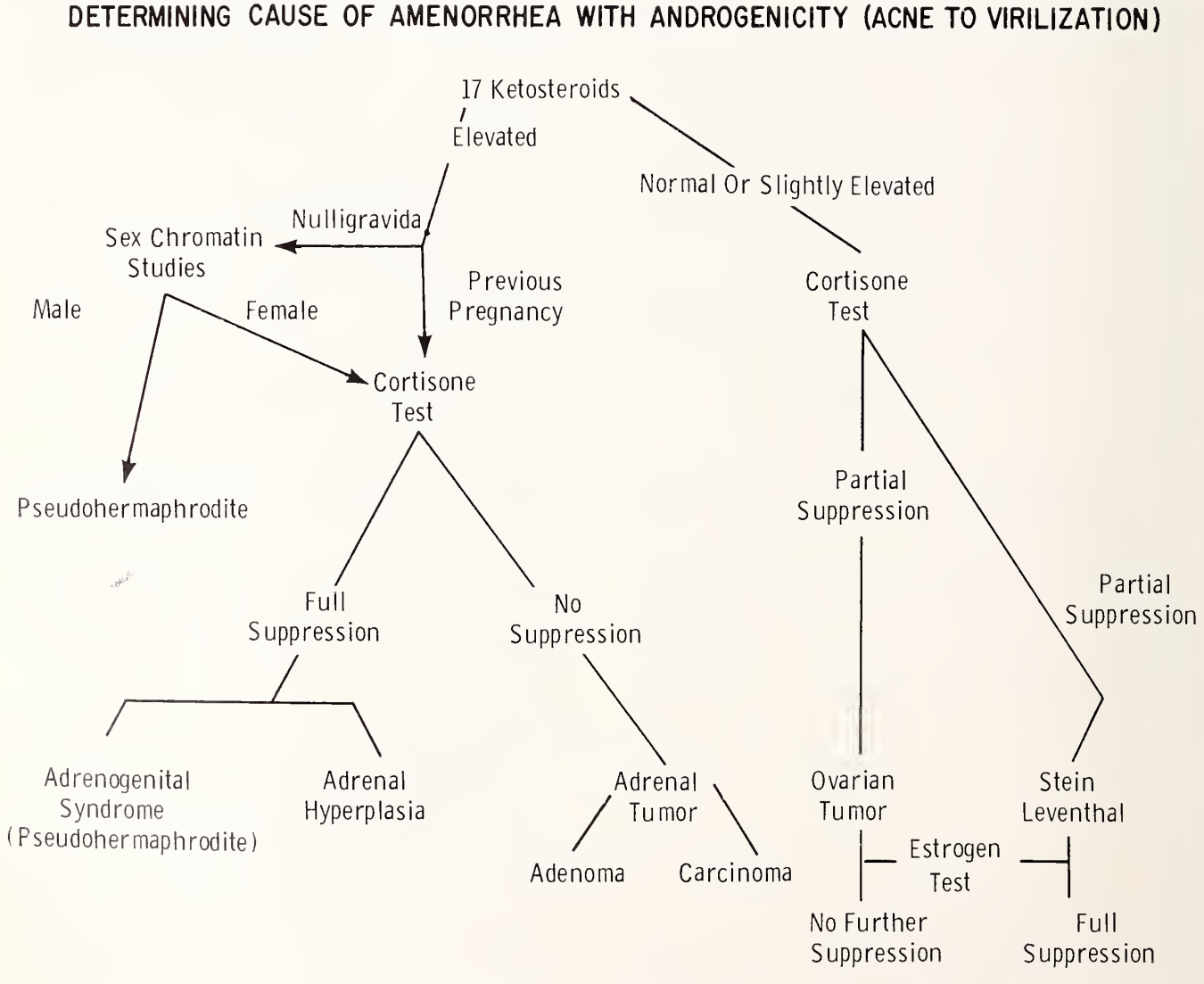

Figure 5. The mode of performing the cortisone and estrogen tests is outlined in the text.

elevation in the 17-ketosteroids. This laboratory finding and evidence of masculinization and a pelvic mass are usually diagnostic. Surgical excision of the tumor is the obvious therapy. If the ovarian tumor is small (a hilar cell tumor), if virilization is minimal or absent, and if hirsutism is moderate, the patient is clinically indistinguishable from those with only simple hirsutism. Suppression studies and ovarian visualization help to resolve the diagnosis.

MANAGEMENT OF THE MORE COMMON SIMPLE HIRSUTE GROUP

The maintenance dose of dexamethasone is continued beyond the period of diagnostic study, since it may serve as the basis of treatment when the final diagnosis has been made. This continuation eliminates the need to resuppress the adrenals. Since the adrenals should be suppressed around the clock, the q8 hr. dosage regimen should be adhered to.

If the diagnosis is benign androgenic hyperplasia of the adrenals, the dexamethasone is continued for at least one year, and periodic 17-ketosteroid determinations are made to ascertain that the value is remaining below 3 to 4 mg. Usually within two or three months the patient resumes ovulatory menstrual cycles and notices the absence of new hair growth. If this clinical result does not occur within a six-month period, the diagnosis may be incorrect and the patient requires re-evaluation. On termination of the medication after one year, in the successful cases, it will be found that the 17-ketosteroids remain below 10 mg. in most instances. Recurrence of menstrual dysfunction and new hair growth can be treated by another course of one or more years' duration.

Idiopathic hirsutism is excessive hair growth that can be progressive in a woman with normal menses. Occasionally the menstrual cycles in such patients prove to be anovulatory, and often if these women are followed long enough, they are found to develop oligo- or amenorrhea. This disorder appears to be a quantitative variant of benign androgenic hyperplasia, and it can be treated in the same manner.

It should be emphasized at this point that a daily maintenance dose of 0.75 mg. of dexamethasone is a physiologic substitution dose equivalent to the normal adrenal production on an average day. As a result, the side effects seen with excessive glucocorticoid therapy are unusual. However, the patient's adrenals cannot respond to severe physical stress such as major surgery, extensive injury or serious illness, and at such times an increased glucocorticoid substitution is required. Any condition which contraindicates the use of glucocorticoids contraindicates this therapeutic regimen. The author has found that if a pregnancy occurs while the patient is under treatment, the medication can be continued for the control of excess hair growth without endangering the pregnancy.

If the diagnostic workup indicates that the ovary is the source of androgen, the mode of therapy should be varied on the basis of the following factors:

1. The woman with progressive hair growth, emotional upset about her hirsutism, and no desire to reproduce can be treated by adrenal suppression with dexamethasone and complete ovarian suppression with 2 mg. of stilbestrol daily. An oral progestogen is given for five to 10 days each month to induce withdrawal bleeding. A higher or lower estrogen dosage can be used, depending on the clinical response. The author has failed in his attempts to maintain ovarian androgen suppression with low stilbesterol doses of 0.1 mg. every eight or 12 hours[10] so that ovulation might occur. In a variable period of time, the ovaries escape, and the 17-ketosteroids rise, and the acne and increased hair growth recur.
2. The woman who desires to have children, but has progressive hair growth and enlarged ovaries, can be treated by wedge resection of the ovaries. If this fails, she may respond to dexamethasone alone.
3. The patient with major adrenal and mild ovarian components in her excessive androgen production often does well clinically on just dexamethasone suppression. Very infrequently one sees a woman in this category who continues to grow excessive hair. In this situation, the physician should suspect that the ovarian component is due to ovarian testosterone rather than to the less potent androstenedione or dehydroepiandrosterone, and that she should be treated as in No. 1 or No. 2.

Clomiphene has been reported as a successful inductor of ovulation in some of the androgenic disorders.[11] However, it in no way achieves regulation of the excess androgen secretion. The author has limited his use of it to those women in whom infertility is of immediate concern and in whom clinical androgenicity is minimal. Even if a pregnancy is achieved, such a patient must be watched periodically for an increase in her androgenic manifestations, and must be treated accordingly. It is also of interest that in women with androgenic hyperplasia of the ovaries, a course of clomiphene often produces a temporary but significant rise in the 17-ketosteroids.

In women with hirsutism, local treatment of the excess hair may include clipping, plucking, bleaching, shaving or the use of wax or chemical depilatories. After hormonal or surgical therapy has stopped new hair growth, electrolysis can be recommended for a more permanent result. This is an expensive and time-consuming procedure, and it should be done by a competent operator.

Once appropriate therapy has been instituted, excess hair growth slows or ceases within several months. A number of the patients will demonstrate a moderate loss of excess hair over one or two years. Rather infrequently, a woman may lose nearly all of her hirsutism. The author has

personal knowledge of a moderately hirsute unmarried female who lost all of her excess hair over a two-year period of complete adrenal and ovarian suppression.

CONCLUSIONS

The purposes of this paper have been to acquaint the clinician with some basic information concerning the nature and pathogenesis of androgenic disorders in the female, and to broaden his diagnostic and therapeutic use of the standard laboratory facilities at his disposal.

The information presented is by no means infallible. Rather, it merely provides a base of present-day knowledge from which future clinical and laboratory progress can be achieved.

The therapeutic regimens outlined are not without danger, and it is imperative that the woman under treatment be dependable and that she be available for periodic revisits to her physician.

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 453

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
SALLY R. OSBORNE, Secretary

CLINICAL SUMMARY

A 63-YEAR-OLD WHITE diabetic woman with schizophrenia was admitted from a mental institution. The history was unobtainable from the patient. Her diabetes had been controlled in the past with three Diabinese tablets daily and an 1,800-calorie diet. Information obtained from the institution revealed that she had had abdominal difficulty for 12 months. Six weeks before admission, she had developed an abdominal distention that improved with nasogastric suction and the placement of a rectal tube. On the night before her admission, the patient had again become distended, and nasogastric suction had been instituted. Feculent vomiting and numerous loose stools had ensued, and she was transferred to the University Hospitals.

At the time of admission she responded only to painful stimuli. The blood pressure was 86/36 mm. Hg, the pulse was 92/min., the respirations were 36/min., and the temperature was 97.8° F., axillary. The lungs were clear to percussion and auscultation. The heart had a regular rhythm, and there were no murmurs. The abdomen was distended and tympanitic, and the entire abdomen was acutely tender to palpation. There were no palpable masses or hernias. The abdomen was silent. The hemoglobin on admission was 17.1 Gm. per cent, the hematocrit was 55 per cent, and the white blood count was 4,800/cu. mm. Urinalysis revealed a trace of protein, and the urine was negative for glucose and cells. The specific gravity was 1.010. The blood urea nitrogen on admission was 80 mg. per cent, and the creatinine 1.9 mg. per cent. The CO_2 was 9.2, the sodium 128, the chloride 105, and the potassium 4.1 mEq./L. The blood sugar on admission was 145 mg. per cent, and the serum amylase was 133 units. X-ray films of the abdomen obtained on admission revealed marked distention of the sigmoid colon and mild distention of the right side of the colon. The interpretation was sigmoid volvulus. A rectal tube was passed, producing a rush of air and about 250 cc. of liquid feces. Films obtained following this procedure revealed considerable retained fecal material, but marked reduction in the size of the sigmoid colon.

During the three days following admission, intravenous fluids corrected the dehydration and electrolyte imbalance that had been noted on admission. The abdomen gradually became less distended and less tender, but remained silent. Four

days following admission, the patient again developed vomiting, and the abdominal distention and tenderness increased. Films obtained at that time revealed dilated loops of large and small bowel, and a diagnosis of large-bowel obstruction was made. Sigmoidoscopy was carried out to 25 cm., but there was no significant release of fluid or air. In view of the clinical and radiologic findings, it was felt that the volvulus of the sigmoid colon had recurred.

At abdominal exploration, the sigmoid was markedly dilated and twisted about its mesentery. There was dilatation of the remainder of the colon, and of many loops of small bowel. An area of necrosis without perforation was noted in the sigmoid colon. This area of necrosis was too far distal to be exteriorized, and it was therefore decided to resect the sigmoid, including the necrotic area. The distal portion of the large bowel was closed 5 cm. above the peritoneal reflection, and a colostomy was made of the proximal segment. Cloudy peritoneal fluid was present in the abdominal cavity which on culture revealed hemolytic Staphylococcus aureus, Escherichia coli, and Proteus mirabilis.

At various times in the postoperative period, the patient was treated with tetracycline, chloramphenicol and penicillin. On the first postoperative day she developed acute parotitis, and it was treated by radiation. Her temperature during the first three postoperative days gradually rose to a peak of 104°F., axillary, on the third postoperative day. On the second postoperative day the abdomen was soft, and there was an occasional bowel sound. The colostomy, although receding, was viable. On the third postoperative day the patient's condition was deteriorating. The colostomy was still receding into the wound and was of questionable viability. There had been no stool through the colostomy. On the fourth postoperative day the patient's condition continued to deteriorate. Her systolic blood pressure was 70 mg. Hg, and Aramine was given to maintain it. The colostomy produced no spontaneous bowel movements. However, on digital examination a small amount of soft brown stool was noted. Her hemoglobin was 11.8 Gm. The serum chloride was 115, the potassium 5.5, the sodium 141, and the CO_2 18.2 mEq./L.

The patient's course continued to deteriorate, and she died on the fifth postoperative day. Blood studies obtained on the day of her death revealed the BUN to be 75 and creatinine 2.1 mg. per cent. The CO_2 was 19.1, the sodium 131, the potassium 5.2, and the chloride 97 mEq./L.

CLINICAL DISCUSSION

Dr. E. Green, Surgery: This CPC case, number 453, will be discussed for the students by Mr. Engebretsen.

Mr. B. Engebretsen, junior ward clerk: The patient was a 63-year-old white female, a diabetic mental patient, who came in with one year's history of abdominal complaints of an unspecified nature. Upon admission, she was found to have abdominal distention, feculent vomiting and numerous loose stools. She was first treated conservatively by passage of a rectal tube, and it relieved the obstruction for a while. She later underwent surgery. The diagnosis was sigmoid volvulus preoperatively, and exploratory laparotomy confirmed it. A necrotic portion of the bowel was resected, and a colostomy was performed. The patient did poorly after surgery, and she died on the fifth postoperative day.

Some of the causes of volvulus that I think we must consider in this case include the following: ileus, tumors, foreign bodies, fecaliths, diverticulitis, and adhesions from something such as pelvic inflammatory disease or inflammation of the colon. From the protocol, however, it is hard to select any one of them. Most possibilities such as tumors, foreign bodies, fecaliths, diverticulitis, or adhesions would have been apparent at surgical exploration.

There is another common predisposing factor to volvulus in older patients, and especially in mental patients. It is adynamic ileus, which is simply a lack of function of the colon leading to an accumulation of feces. If there is a redundant loop of sigmoid, the weight of the accumulated feces can lead to volvulus.

Amebiasis is something else which should probably be considered in this case, since the patient had been living in a mental institution. It could be a cause for volvulus, although I'm not too sure how commonly it occurs. Again, however, there is nothing in the protocol to support such a possibility.

The patient's postoperative course was complicated by the fact that she had diabetes, leading to poor resistance, and also, of course, there is the possibility that the organisms, or some of them, were resistant to the antibiotics employed, or that the treatment was inadequate. Parotitis is occasionally a fatal complication of surgery, but we don't think it was in this case.

We believe that this patient probably had sigmoid volvulus secondary to an adynamic ileus, that she developed necrosis of the gut as a result of this obstruction, that peritonitis then resulted, with a consequent toxemia or septicemia, and that she probably died of cardiovascular collapse. The toxemia probably would have been due to E. coli endotoxin.

Dr. Green: The case will be discussed for the staff by Dr. Liechty.

Dr. R. D. Liechty, Surgery: I think Mr. Engebretsen's presentation and discussion were very well done.

This 63-year-old diabetic woman was admitted from a mental institute. She underwent an operation on the fifth day after admission, and she died four days postoperatively.

She had had abdominal difficulties for a year, culminating in abdominal distention relieved with a rectal tube at the local institution. The difficulties recurred within six weeks. She was start-

ed on nasogastric suction, apparently with some relief, and had fecal vomiting when she was sent here. The laboratory data show dehydration, but the white count was only 4,800/cu. mm. Her BUN was elevated, a finding consistent with the vomiting or perhaps stasis in the gut, but there was also a rather curious decrease in the sodium, though the chlorides were fairly normal. She was in acidosis and shock—according to the blood pressure in her arm, at least. It was 86/36 mm. Hg. Volvulus was diagnosed on x-ray, which is our single most important diagnostic tool. Perhaps Dr. Cohen will show the films of that volvulus.

Dr. W. N. Cohen, Radiology: Figure 1 is a film of the patient's abdomen which was obtained on admission. Note the markedly dilated loop of bowel, and the vertical white line in the center. That line represented the adjacent medial walls of both the proximal and distal loops of sigmoid. In addition, surrounding this was the distended proximal portion of the colon. Another film (Figure 2) was obtained the same day, after a rectal tube had been inserted. It was positioned in a direction 180° opposite to that of the normal sigmoid, and it indicated that an antimesenteric rotation persisted. It was apparent that the previously dilated sigmoid loop had been decompressed. The radiographic appearance was quite characteristic for sigmoid volvulus. Another consideration would be a distal colonic carcinoma, which can occasionally produce this degree of dilatation.

On the chest film obtained the next day, some residual dilated loops within the abdomen could be seen. The diaphragms were elevated, and there was an area in the right base which was not well aerated. In addition, the retrocardiac region was more opaque than it should have been, reflecting a consolidative process in the left lower lobe.

Figure 3 is the abdominal film obtained on the day of surgery. The rectal tube was again seen, and it had been in place for four days, if it had not been removed and reinserted. At that time there was a greater amount of small-bowel gas, suggesting—especially since there had been distal decompression—that a reflex type of ileus had developed.

Figure 4 is a film taken with the patient sitting. The thick transverse line was her protuberant anterior abdominal wall. Consolidation could again be observed in the base of the left lung. There are two main differential considerations of the pulmonary finding. The primary one is atelectasis but a pulmonary infarction may also have this appearance.

Dr. Liechty: After the x-ray diagnosis was made, therapy was initiated by sigmoidoscopy and insertion of a rectal tube. The point should be made that this must be done gently, with a well-lubricated soft rubber tube. Otherwise there is definite danger of perforating the colon, with consequent peritonitis. Sigmoidoscopy is the preferred method of treatment for these patients, rather than utilizing a barium enema to reduce the volvulus, because it permits one to assess the appearance of the rectal mucosa. There was a rush of gas and liquid feces after insertion of the rectal tube, and for three days afterward the patient did well, except that her abdomen was silent. I think that this is significant. She had a third occurrence (or a second recurrence) then, with distention, and that time it was unrelieved by sigmoidoscopy.

Operative treatment of the volvulus was undertaken on the fourth day after her admission to the hospital. The ideal treatment for volvulus and bowel necrosis is exteriorization. It is one of the time-honored treatments in surgery, dating from long before the antibiotic era. If the bowel is necrotic or perforated, all of the contaminated colon can be removed from the abdomen and a double-barreled colostomy set up, to be closed at a later time. But at the time of operation in this case, that procedure was impossible because the necrosis extended too low in the sigmoid colon. It could not be exteriorized, and therefore a Hartman procedure was done, which consists simply of resecting the sigmoid colon, closing the distal end, and performing a proximal colostomy.

Again, a very significant factor was the discovery that peritoneal fluid was contaminated by at least three organisms: hemolytic Staphylococcus, E. coli, and Proteus. Despite antibiotics, I think we should all recall that peritonitis is still the leading cause of death on surgical services throughout the world. According to the protocol there was no direct perforation, but in my opinion that makes little difference. We have to remember that an older patient who is diabetic and who is obviously in poor nutrition resists infections poorly. The area of the peritoneum roughly equals the area of the external skin. It is bathed in organisms, and sets the stage for disaster. These are the reasons why the mortality from peritonitis approaches 25 per cent.

This patient was treated with antibiotics: penicillin, Chloromycetin, Acromycin. She then developed the ominous sign of parotitis, a condition which often occurs in the debilitated and aged, and particularly in patients who are dehydrated.

An interesting and rather curious sign (along with the low admission white count of 4,800) was a low admission temperature. For the three days following the operation, her temperature rose at least as high as 104°F., and the colostomy started sinking back into her abdomen. Every surgical resident will experience this phenomenon sooner or later, and it occasions one of the loneliest feelings in the world. It signifies trouble. The viability of the colostomy stoma became questionable.

On the fourth day after operation she was given Aramine to bring up her blood pressure. Aramine is a powerful vasoconstrictor, less inclined than others to produce cardiac effects, but in light of current knowledge it is useless in treating shock. Jacob Fine,* who has spent a lifetime in dealing

* Fine, J.: Septic shock. JAMA, **188**:427-432, (May 4) 1964.

Figure 1. Radiograph of abdomen obtained on admission. There is considerable dilatation of a large central loop of bowel consistent with sigmoid colon.

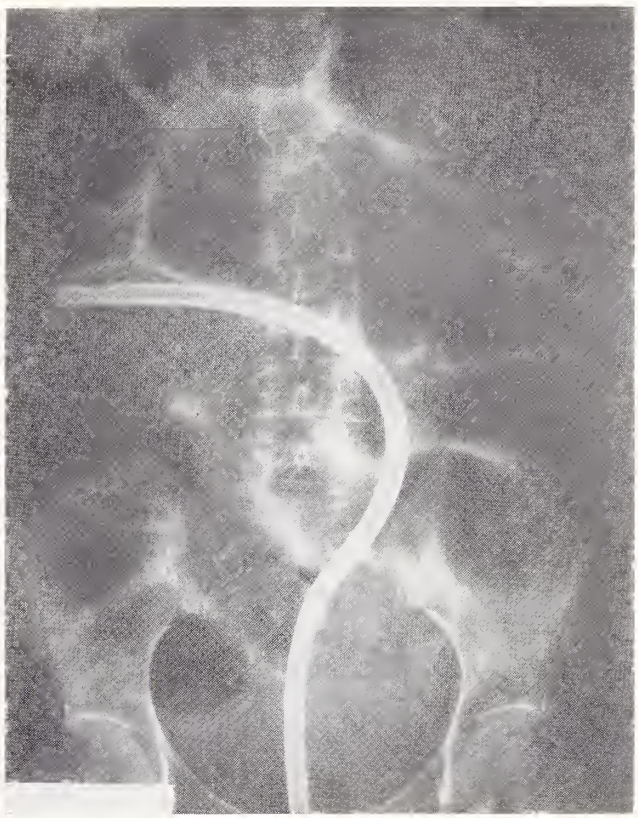

Figure 2. Examination on the same day after the insertion of a rectal tube and decompression of the sigmoid colon showed the tube oriented 180° opposite that of normal sigmoid position.

Figure 3. Examination on the day of surgery. In the interval there had been an increase in the amount of small-bowel gas.

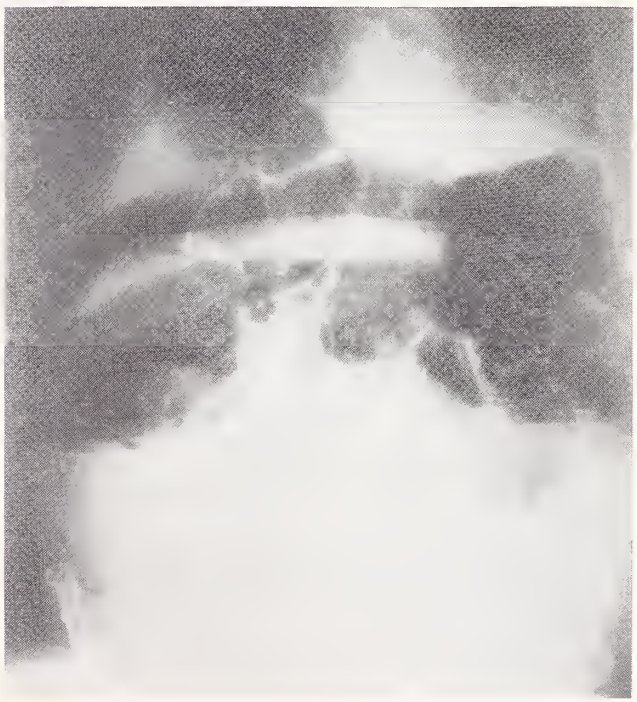

Figure 4. The patient is in a sitting position. The transverse white line represents her protuberant abdominal wall. Consolidation can be observed in the left lung base.

Pro-Banthine
(propantheline bromide

Intragastric photography has provided a new and precise method of measuring the effectiveness of anticholinergic drugs. The transition from gastric motor activity to relaxation seen with effective doses of such drugs takes only a few seconds and is easily demonstrated.

The importance of vagal stimulation of gastric hyperacidity and hypermotility makes such measurements particularly important in evaluating the parasympatholytic effect of drugs used in patients with peptic ulcer, gastritis, biliary dyskinesia and other gastrointestinal disorders.

See fo

Pro-Banthine has been shown[1] to produce complete gastric motor inactivity with doses of 6 to 8 mg. intravenously. Comparison tests were made with the belladonna fraction, atropine. Measured usual dosage unit versus usual dosage unit, Pro-Banthine was more than four times as effective as the belladonna alkaloid.

Indications: Peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Oral Dosage: Adequate dosage should be given for optimal results. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

Side Effects and Contraindications: Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. Pro-Banthine is contraindicated in patients with glaucoma, severe cardiac disease and prostatic hypertrophy.

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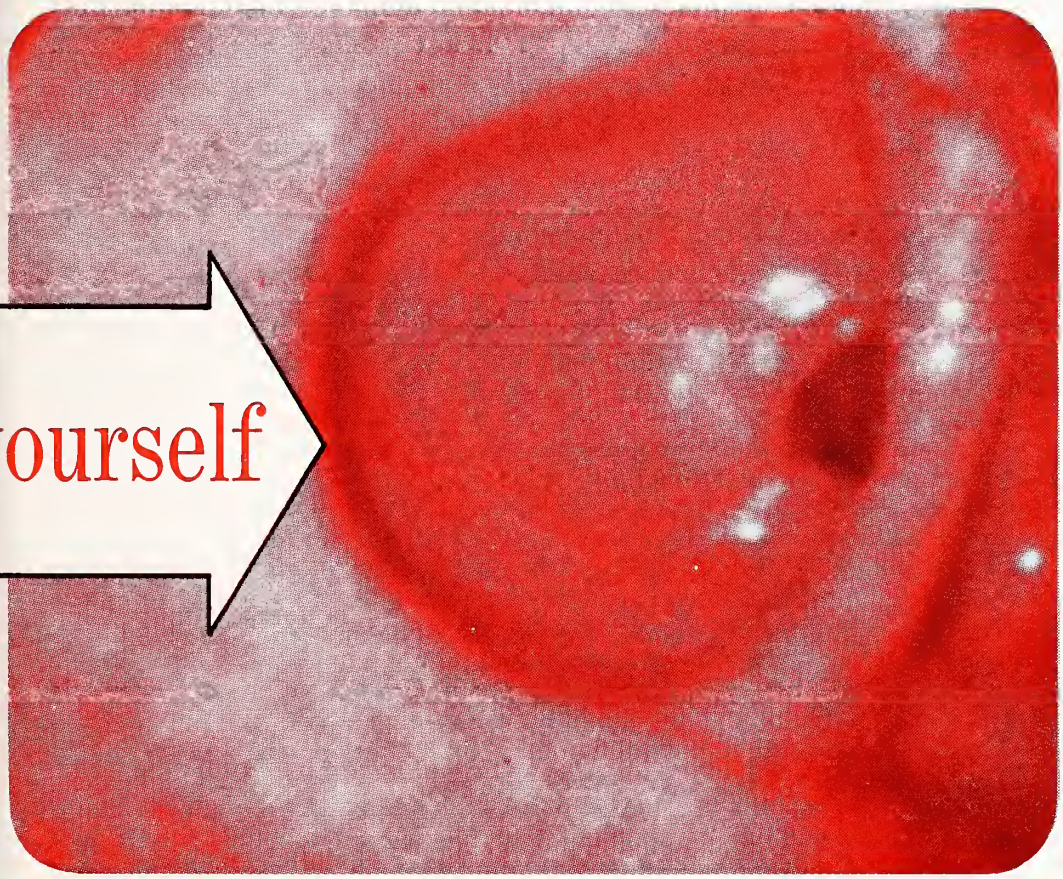
yourself



Complete gastric relaxation with Pro-Banthīne. As this intragastric photograph demonstrates, gastric relaxation is attained with 6 mg. of Pro-Banthīne intravenously; the antrum is relaxed and the pyloric orifice remains open. Full intravenous doses of atropine (4 mg.) produce no measurable effect.

SEARLE

Research in the Service of Medicine

with shock, maintains that all shock eventually becomes septic shock. Splanchnic vasoconstriction, one of the results of shock, causes the release of gram-negative endotoxins from the gut, which in most instances are detoxified by the reticuloendothelial system in the spleen and the liver. Also, the endotoxin which is released in septic shock is one of the most powerful vasoconstrictors known, and it in turn causes extreme and intense constriction of the arterial system which supplies the liver and spleen. This vasoconstriction, in effect, knocks out the endotoxin-detoxifying system in the body.

So the sequence of events in endotoxic shock is as follows. The endotoxin is released from the gut (or, in this case, probably from the contaminated peritoneal fluid). It causes an extreme vasoconstriction of the liver and the spleen, knocking out this protective mechanism of the body. Therefore, a vicious circle is set up, ending in irreversible shock unless this extreme vasoconstriction is relieved.

The one drawback to this hypothesis is that this same phenomenon takes place in germ-free animals. However, Dr. Fine explains this seeming paradox in terms of the animals' diet. The germ-free animals receive the end products of these bacterial endotoxins in their food. In other forms of shock, such as hemorrhagic shock, there is a vasoconstriction of the gut and the splanchnic area. This, in turn, causes ischemia of the bowel and a release of endotoxins. Theoretically, Aramine accelerates this process. We should be using sympatholytic drugs or perhaps spinal anesthesia to release vasoconstriction. Experimentally, vasodilator drugs are effective, but must be given very early, or even before the insult. Dr. Fine states that in the future an effective treatment of shock may be an antitoxin to the gram-negative bacterial endotoxins.

This patient unquestionably had volvulus, and volvulus causes bowel obstruction. The "big three" of bowel obstructions are adhesions, hernias and tumors. We are talking about *all* bowel obstructions now—of small bowel and colon. Volvulus is a poor fourth. Only about 4 per cent of the people in our country are obstructed by volvulus. However, this is not true around the world. Volvulus is very common in eastern Europe, Russia, Finland, and Kenya. In Kenya and parts of Russia an estimated 50 per cent of all bowel obstructions are caused by volvulus. In the U. S. and western Europe, the share is probably less than 5 per cent. Many things have been indicted as causes. In Kenya, for example, the people eat maize mush meal. They may eat up to two quarts of it early in the morning, and eat no solid food until evening. Apparently it causes a rush through the gut of material high in cellulose content. In Europe, too, a high bulk of cellulose has been indicted. In India, volvulus occurs commonly during the Ramadan season, when fasting during the day is followed by feasting at night. Apparently a big rush of food taken at one time after an all-day fast is a factor. Sigmoid volvulus is more common than cecal volvulus, by at least 4:1 throughout the world. Cecal volvulus is based on somewhat different factors.

In the U. S., volvulus displays different patterns, and for one reason or another there is a preponderance of cases in mental patients. Also, a very high incidence of rectal prolapse occurs among these patients. Perhaps in some way this is related to amebiasis, which also, as Mr. Engebretsen said, is very common in mental patients. Volvulus is more common in women than in men, perhaps because of the wider pelvis and the relaxation and distention of the sigmoid colon subsequent to pregnancies. Extreme inactivity, irregular bowel habits and constipation—very common among inmates of institutions—may play a role in volvulus. In addition, the dietary habits of mental patients are completely unpredictable. Patients have broken tongue-blades, wrapped them in rubber, and swallowed them. We have also seen patients who have eaten parts of their clothing, dressings, other cotton material, pencils, wire, spoons, hair and many other indigestible materials.

Anatomically, two factors probably are important. First of all is the large redundant sigmoid colon, and second is the narrow base mesentery which allows the sigmoid colon to swing back and forth and to curl around itself. The other possibility—and Dr. Mason wrote about it in 1957—is ileus. He mentioned that hypokalemia is one of the factors that can cause ileus. In this case, however, hypokalemia was not a factor. We can account for the patient's ileus on the basis of peritonitis. I am not exactly certain when the peritonitis began, and since this woman was unable to give a history and was unresponsive a good part of the time, I doubt whether the members of the staff who took care of her could tell, either. We have seen patients with myxedema who have had concurrent ileus and volvulus.

From 1947 on, the mortality from volvulus in 232 cases reviewed in this country was about 23 per cent. In 20 cases here at University Hospitals the mortality was 20 per cent, Dr. Mason has reported. Initially, the treatment is sigmoidoscopy, and to answer Dr. Cohen's question, I think it probably would not be unusual at all to leave the rectal tube in place for as long as five days. Oftentimes, in a recurrent case such as this, rectal intubation permits preparation of the bowel for definitive operative correction. But it has to be done with care and under direct vision if one is to be quite certain that the colon is not perforated. The diagnoses on this patient—and I would agree with Mr. Engebretsen on a good share of them—are sigmoid volvulus, peritonitis, and septic shock.

The disappearing colostomy bothers me. Perhaps we could explain it on the basis of a mesenteric-vein thrombosis which had occluded the blood supply to the colostomy stoma. Also, to make my diagnosis a bit more exciting and to climb out onto a weak limb, I am going to say that she had myxedema. When she was admitted, her tempera-

ture was only 97.8°F. Her white blood count at that time was low. The WBC is known to be blunted by myxedema, and also a decrease in sodium is often seen in patients with that condition. However, the CO_2 in myxedema is usually high, and this woman was in acidosis, so my case for myxedema is not very impressive.

Dr. Green: How often, Dr. Liechty, when we reduce a sigmoid volvulus with a tube, does it recur so promptly?

Dr. Liechty: I think the recurrence rate is quite high, as demonstrated in this woman. Also, throughout the literature, the recurrence rate is reportedly quite high, but the chief virtue of decompressing the abdomen by rectal tube, I think, is to allow time for careful preparation of the bowel, and I believe if this occurred over two times—or certainly if it took place three times—I'd go ahead and do a definitive corrective operation.

Dr. Green: But you wouldn't advocate reducing it with a tube, then waiting perhaps two days, and then routinely operating. You'd want to see it recur at least once.

Dr. Liechty: Well the volvulus had occurred at least three times in this patient. Therefore, I think she should have had an operation.

Dr. Green: Have you ever seen this condition in anyone who was not an institutionalized mental patient?

Dr. Liechty: Yes.

Dr. Green: How long do you think the tube should be left in place? In this particular patient it was left in for four days, and as was pointed out in the protocol, there was an area of necrosis in the large bowel at the time of exploration. Do you think there is any connection between those two facts?

Dr. Liechty: I think it depends on the tube. If the tube is a hard one, I would not leave it in place very long—just long enough for decompression. But the soft tubes such as we use for upper gastrointestinal decompression may be left in for weeks with few adverse consequences.

Dr. Green: Dr. Tammes will discuss the findings at postmortem examination.

Dr. A. R. Tammes, Pathology: The main findings at autopsy, of course, were attributed to large-bowel disease and to its sequelae. The abdominal wall itself showed the usual incision and the colostomy stoma, which, although retracted somewhat, was viable. When the abdominal cavity was opened, there was about 500 ml. of clear fluid. Though the fluid was clear and the peritoneal surfaces were shiny, the fluid contained hemolytic Staphylococcus aureus, E. coli, and one of the Proteus organisms. A small abscess located between the large bowel and the anterior abdominal wall, just adjacent to the colostomy stoma, contained these same organisms.

A striking finding was that a segment of the large bowel extending proximally from the colostomy stoma to the cecum was very dilated and packed full of hard fecal material. The cecum and the small bowel above it were also dilated. Although the bowel contained a large amount of very firm, hard fecal material, we found no stercoral ulcers at autopsy, nor did we find any gangrenous areas. The length of this fecal-packed piece of gut was 110 cm. Sections of the large bowel were dilated up to 6.5 cm. in diameter. Microscopic examination of the large-bowel wall showed that the mucosa and muscle layers were viable. Near the area of abscess formation, the expected acute inflammatory response was seen.

When we examined the remaining organs of this patient, the heart, the brain, the kidneys and the spleen showed infarcts. The microscopic sections of the infarcted areas showed large colonies of proliferating bacteria. Thus the infarcts were all septic. The ages of the infarcts were somewhat difficult to ascertain, but it was easy to see that they were older than 24 hours. The bulk of them appeared to be possibly two or three days old, and any number of them might have been four or five days old.

Autopsy samples of peritoneal fluid, blood, and the aforementioned abscess all cultured hemolytic Staphylococcus aureus, E. coli, and one of the Proteus organisms. Death, undoubtedly, was due to septicopyemia, secondary to the colonic disease, and the septicopyemia had occurred during the volvulus episode. It is felt that the causative organisms gained entrance to the body at the time of volvulus and infarction of the gut. We established that there had been an area of dead gut at the time of surgery, and that bacteria had already transmigrated the wall of the gut and infected the peritoneal cavity.

Dr. Green: Dr. Cohen, could you enlighten us a little bit on x-ray diagnosis of sigmoid volvulus?

Dr. Cohen: This case illustrates the plain-film findings of sigmoid volvulus very well. Surprisingly, cecal volvulus sometimes presents a similar appearance. The cecum, when it does volvulate, does so in the axial direction, and tends to reside in the left upper quadrant. You can see that if it were to rotate another 180°, it would be in the left lower quadrant. The dilated cecum, because of the ileocecal attachment, would then tend to have a double-loop appearance. Of course, these are readily differentiated by a contrast enema.

If a barium enema were done on this patient, there would be a "beaked" appearance at the site of the volvulus, which is virtually pathognomonic. If the volvulus were tight, the flow would stop at that point. On occasion, some barium will pass through the twisted segment and into the proximal loop. When this occurs, the appearance of the proximal loop will also taper, and the "beaks" will be facing each other.

The configuration at the site of torsion helps the physician in foreseeing possible problems in tube-placement. If the contrast flows into the proximal limb, the tube will pass quite easily. On the other hand, if there is a definite retrograde obstruction,

more difficulty can be anticipated. Occasionally, placement under fluoroscope control is possible, when the torsion is more proximal than the 25 cm. limit of the sigmoidoscope. In this circumstance, a lateral view with contrast in the distal segment will give a good approximation of the level.

Dr. Green: In retrospect, can you see x-ray clues to the massive fecal impaction in this patient?

Dr. Cohen: Only on the immediate post-decompression film was much fecal material apparent. However, it was consistent with a distal colonic obstruction.

Dr. Green: Dr. Liechty, if you had diagnosed the massive fecal impaction clinically, how would you have handled it postoperatively?

Dr. Liechty: I doubt very much that anything could have been done for this woman. Fecal impaction wasn't her chief problem. I wouldn't be so much concerned about the fecal impaction as I would be about peritonitis and a fever of 104°F. in a diabetic woman.

Dr. Green: Do you think operative procedures are ever indicated for the relief of fecal impaction?

Dr. Liechty: Oh, yes. I have operated and have cleaned out huge amounts. Dr. Ziffren has done it many times.

Dr. S. E. Ziffren, Surgery: Not too many times.

Dr. Liechty: As a matter of fact, a woman was recently admitted with a huge rectal fecal impaction. I had to use delivery forceps to remove it. Such impactions can become extremely hard after a time.

Dr. Green: Dr. Ziffren, have you ever seen a massive impaction behind a colostomy, or have you seen only rectal impactions?

Dr. Ziffren: I don't think the impaction was the cause of death. The impaction kept getting worse. It was a vicious cycle, for obviously the colostomy was receding, and the patient didn't have a patent orifice. I don't think it wise to keep looking at a colostomy as it recedes each day. It is better to do an operative correction rather than risk having the colostomy fall back into the peritoneal cavity. The patient got into trouble because her colostomy could not function. That was the primary cause of difficulty; the impaction was secondary.

I'd like to ask why the attending staff kept taking axillary temperatures. Couldn't they take the temperature any other way?

Dr. Green: There is nothing in the chart to explain why axillary temperatures were taken.

I don't think anyone here has said that she died from the fecal impaction.

Dr. Ziffren: Well, that's the impression I got.

Dr. Green: No, I think she had a generalized peritonitis, as proved by her operative peritoneal culture and findings, before the colostomy ever started to recede.

Dr. Ziffren: Yes, but Dr. Tammes said the peritoneum was shiny and smooth. She had only a localized abscess down in the pelvis, wasn't that right?

Dr. Tammes: The fluid contained organisms.

Dr. Ziffren: Yes, but it was all localized, so that the remainder of her peritoneal cavity was clean. But then the colostomy started receding, and when it pulls away from the peritoneal wall, it is a dangerous complication and is an operative indication. It became tighter and tighter, and nothing could escape from it. I don't think putting one's finger in the colostomy solves the problem. One has to operate on the patient to get the colostomy back out so that something can come through it. That's my feeling, now, but perhaps Dr. Liechty doesn't agree.

Dr. Liechty: Oh, I agree! But I think Dr. Green's point is that the peritonitis was there earlier.

Dr. Green: Did she have an abscess around her colostomy at postmortem examination?

Dr. Tammes: There was just the small abscess that I mentioned, along the margin of the colostomy.

Dr. Green: Had the colostomy retracted completely into the peritoneal cavity?

Dr. Tammes: No.

Dr. Leichty: Dr. Tammes, you examine thyroid glands at postmortem, don't you?

Dr. Tammes: Yes. The thyroid weighed 15 Gm., and was normal histologically.

Dr. Cohen: What about the lungs?

Dr. Tammes: The lungs showed some atelectasis in the bases. There were a few very small and very fresh hemorrhagic infarcts. I think most of what you saw on the film was due to atelectasis.

Audience: The patient had an elevated serum amylase on admission. I'd like to know what the pancreas looked like at postmortem, and also what levels of serum amylase you get with parotitis.

Dr. Tammes: I don't believe she had an elevated amylase. It was 133, and that is about at the upper limit of normal. The pancreas was completely normal in appearance at autopsy.

As to the latter part of your question, I have no answer.

ANATOMIC DIAGNOSES

1. Status post sigmoid colon resection and colostomy.
2. Large-bowel obstruction secondary to massive fecal impaction.
3. Septicopyemia (hemolytic Staphylococcus aureus) with septic infarcts of brain, myocardium, kidneys and spleen.

STUDENTS' DIAGNOSES

1. Sigmoid volvulus caused by adynamic ileus.
2. Perforation of the gut.
3. Peritonitis.

DR. LIECHTY'S DIAGNOSES

1. Sigmoid volvulus.
2. Peritonitis.
3. Septic shock.

Editorials

THE PHYSICIAN'S ROLE IN ACCIDENT PREVENTION

"Agriculture has the third highest rate of accident occurrence of any major profession, and kills more people than any other occupation." This quotation from L. W. Knapp, Jr., of the Institute of Agricultural Medicine at the University of Iowa, was given prominent space in the April 11 issue of the AMA NEWS.* Farm accidents are just one phase of the sad story of 107,000 fatal mishaps in this country during 1965.

The startling frequency of farm accidents and the considerable likelihood of their being fatal constitute information which must be projected to each farm family in the State of Iowa by every means of communication. It is only by making safety "a way of life" that these figures can be reduced. An editorial in the same issue of AMA NEWS pointed out that the physician's immediate concerns are with patients who have already fallen victim to injury or disease and that the doctor tends to neglect accident prevention. At a recent meeting of the Congress of Environmental Health Problems, however, emphasis was given to the role he can play in preventing accidents on the highway, in the home and on the farm.

The farmer is familiar with the hazards of his occupation and with the dangers he encounters in operating modern farm machinery. Mechanical and agricultural engineers are cognizant of defects in the design and in the lack of safety devices, and industry is striving to remedy those deficiencies. But danger is inherent in the operation of tractors, elevators and corn pickers, and mechanical shields for their moving parts cannot be attached in ways that will prevent farmers from leaving them in the farmyard or from hanging them on the nearest fence.

The part which physicians can play in accident prevention is to teach safety as a way of life, rather than to point out the specific mechanical hazards in the operation of equipment. All members of the farm household must be indoctrinated. They must be led to regard the safe way as the only respectable way of performing their tasks. Carefulness must be exalted as a virtue, and they must be led to take pride in the avoidance of haste, shortcuts and dangerous fatigue. They must become no less concerned about the garments they wear when they intend to operate machines or to handle poisonous chemicals than they are about the garments they wear to church.

If the physician is to be effective in educational efforts such as these, he must develop close rapport with his farm families and spend more time with them. Only thus can he exert a salutary influence on the incidence of injuries among agricultural workers.

* AMA NEWS, April 11, 1966, p. 4.

GONORRHEAL OPHTHALMIA NEONATORUM

A recent article on the specific prophylaxis of gonorrheal ophthalmia neonatorum* is especially appropriate at this time because of the increase in the incidence of Neisserian infections in all parts of the nation.

Paul C. Barsam, assistant director of the Division of Adult Health in the Massachusetts Department of Public Health, points out that Neisserian infection is historically the most common and the most serious of all the infections that may afflict the eyes of the newborn. Other organisms can cause conjunctivitis, but they rarely have that effect earlier than the fifth day of life, and rarely cause a profuse purulent discharge. In gonorrheal ophthalmia, however, the onset is very early, and the discharge is copious.

Barsam points out that legislation in most parts of the world has done a great deal toward preventing gonorrheal ophthalmia in the newborn. In 49 of our 50 states, the use of a prophylactic in the eyes of the newborn is required by law. Montana permits it but does not require it. One per cent silver nitrate solution is specified by 22 of the states, and is permitted in all of the rest. In fact 33 of the states provide the individual wax ampoules for use as prophylaxis. Various antibiotic preparations are authorized in a number of states, in an effort to avoid the chemical conjunctivitis which frequently follows the use of silver nitrate.

In an effort to evaluate the efficacy of this prophylaxis, the author reviewed the outstanding studies on the subject covering the past 20 years. These numerous studies included a comparison of silver nitrate with no prophylaxis; a comparison between penicillin and silver nitrate; and other reports in which there were no specific comparisons. In every report comparing the incidence of ophthalmia neonatorum in a silver-nitrate treated group with the incidence among untreated infants, the rate for the treated group was significantly lower. The highest rate reported in an untreated group was 560 per 100,000. In contrast, the highest

* Barsam, P. C.: Specific prophylaxis of gonorrheal ophthalmia neonatorum. NEW ENGLAND J. MED., 274:731-733, (Mar. 31) 1966.

Editorials continued...

rate in those who had received Crede's prophylaxis was 59.5 per 100,000.

According to Barsam, the occasional cases of ophthalmia neonatorum ascribed to failures of silver nitrate prophylaxis have any of several explanations. The solution may have been improperly administered. The saline rinse which is usually employed after instillation of the solution may have precipitated the silver ion. Or the drug simply was not used.

Various studies indicated a high incidence of chemical conjunctivitis following the instillation of silver nitrate, usually lasting no more than 72 hours. However, when properly used it has not been found to cause serious or permanent injury to the eye. By using individual wax ampoules and irrigating the eyes with normal saline after the instillation of silver nitrate drops, one can avoid errors and can keep chemical irritation at a minimum. In the past, serious consequences have occurred as a result of the use of silver nitrate solutions in excess of one per cent, in consequence of errors in compounding. Use of individual ampoules precludes this possibility.

Penicillin has been used extensively as a prophylactic agent, both in an ophthalmic ointment and parenterally. It proved to be as effective as silver nitrate, and it did not cause the chemical conjunctivitis that sometimes follows the latter. However the hazard of sensitivity has discouraged the use of this antibiotic. Serious reactions to penicillin have been reported when it has been used for this purpose.

There have also been numerous studies of other agents used in the prophylaxis of ophthalmia neonatorum. These have appeared to be effective against the gonococcus, but the author asserts "the data on the efficacy of broad-spectrum antibiotics are insufficient to justify their routine use for this purpose." He concludes with this strong observation: "On the basis of available evidence and in view of the current rising incidence of gonorrhea, the continued routine use of one per cent silver nitrate appears to be a necessary prophylactic measure against gonorrheal ophthalmia neonatorum."

Iowa law requires the prophylactic use of one per cent silver nitrate from previously unopened wax ampoules, dropped into each conjunctival sac and followed by a normal saline irrigation. In 1954 the rule was changed, and an ointment containing 100,000 units of penicillin per gram, or 5 mg. of Erythrocin per gram was also approved for the prophylaxis of neonatal ophthalmia. In 1965 the law was further amended, as follows: "The Iowa State Department of Health may give written approval to other ophthalmic prophylactic solutions or ointments upon receipt of a written request accompanied by adequate evidence concerning the effectiveness of the solution or ointment."

It is encouraging and it is fitting that any time-honored routine measure should be questioned, and its efficacy compared with those of alternative methods. After a careful study of the reported literature, however, the Boston public health physician is of the opinion that the original Crede prophylaxis is still the method of choice in the prevention of ophthalmia neonatorum. It is reasonable to expect a storm of protest that newer methods are preferable.

TUBERCULIN AND SARCOIDOSIS

A recent contribution from the Sarcoidosis Clinic at Jefferson Medical College, Philadelphia, sheds some light on the why and wherefore of that poorly understood disease.* During the course of another study, tuberculin tests were given serially to patients who had recovered from sarcoidosis. Quite unexpectedly, most of them failed to react, and that failure prompted a detailed study of the tuberculin reactions of patients who were under prolonged observation in the Sarcoidosis Clinic.

It has been recognized for a considerable period of time that anergy to tuberculin is a characteristic feature of sarcoidosis. Several authors have described patients who had reacted to tuberculin before the onset of sarcoidosis but failed to react during the course of the disease and regained sensitivity on their recovery. The lack of skin sensitivity during the illness was ascribed to an impairment of immunologic mechanisms caused by the systemic lesions of sarcoidosis. In the Philadelphia study, the failure of patients to become sensitive once more after recovering from the condition prompted a search for a more tenable hypothesis than a temporary impairment of immunity.

It has been the practice at the Jefferson Sarcoidosis Clinic to perform tuberculin testing on patients at intervals of one or two years, and a search of the records yielded a total of 179 patients who had completed second-strength tuberculin tests for at least a period of two years. Prior to 1960, the initial test dose was 0.00002 mg. of P.P.D.; since 1960, this has been replaced by an intermediate strength of 0.0001 mg. During the entire study the second-strength P.P.D. was 0.005 mg. For first-strength and intermediate-strength tuberculin, an area of induration 5 mm. in diameter was regarded as positive. An area of induration 10 mm. in diameter was required as a positive second-strength reaction.

In all of the 179 cases, the diagnosis of sarcoidosis had been confirmed by characteristic biopsy findings. At the time of the last tuberculin test,

* Israel, H. L., and Jones, M.: Immunologic defect in patients recovered from sarcoidosis. NEW ENGLAND J. MED., 273:1003-1006, (Nov. 4) 1965.

each patient was evaluated clinically and by x-ray, and was classified as active, inactive or recovered. The last of these groups showed no evidence of thoracic or extra-thoracic residual, and in 10 patients so classified, the Kveim test was negative.

Nine of the 179 patients who had been given serial tuberculin tests developed myobacterial disease and were excluded from the present study. At the time of admission, when the diagnosis of sarcoidosis was made on 170 patients accepted for the study, 126 of them (74 per cent) had negative reactions to second-strength tuberculin. Positive reactions to second-strength P.P.D. were found in 30 patients (17.7 per cent), and in 14 patients a positive reaction was observed in response to 0.00002 or 0.0001 mg. (8.2 per cent). Those findings are very similar to those reported in other studies of sarcoidosis patients both in this country and in Europe.

When the last tuberculin test was performed, and after a mean interval of more than six years from the time of the first test, 132 patients (77.7 per cent) were tuberculin-negative; 25 (14.7 per cent) reacted to second-strength; and 13 (7.6 per cent) reacted to intermediate tuberculin. In the period between the initial and the final tests, five of the 38 whose final tests had been positive had not reacted to second-strength tests.

It was observed that the response to the tuberculin test was not influenced by the course of the sarcoidosis. Of the 170 patients, 65 with active sarcoidosis, 45 in whom the disease had become inactive, and 60 who had recovered—all of similar ages and durations of observation—demonstrated the same failure to develop or regain tuberculin sensitivity.

The observations on the 60 patients who had recovered were also typical of the patients in the active and inactive groups. Of 43 patients who had originally been negative, 37 were negative at the time of the last test, six reacted to second-strength P.P.D. at the last test, and none reacted to intermediate-strength tuberculin. Twelve of the 60 patients were positive to tests with second-strength tuberculin initially; four were negative, four were positive to second-strength, and four reacted to intermediate strength when last tested. Five patients originally reacted to first- or intermediate-strength. On the last test, three of these had the same reaction, one reacted to second-strength, and one was tuberculin-negative.

The authors asserted that the administration of corticosteroids was not a factor in the outcome of tuberculin testing in this group of patients. At the time of final testing, none of the group who had recovered or in whom the disease was inactive were on steroid therapy. Of the 63 patients with active sarcoidosis at the time of the last test, only 11 were taking steroids and their doses were so small as to make it unlikely that the drug could influence their reactions significantly.

B.C.G. vaccination was performed on 11 of the patients who had recovered from sarcoidosis. When tested six weeks later, six patients had negative responses and five had positive reactions to second-strength tuberculin. When tested again after a further interval of six weeks, four of the five patients had no reaction to second-strength, and only one remained positive to tuberculin. A contrasting group consisted of 47 tuberculosis contacts who had been given the same B.C.G. vaccine six weeks after vaccination. Forty reacted to intermediate-strength tuberculin. Of the seven who did not react, three gave positive reactions with second-strength tuberculin.

The authors point out that the generally accepted view has been that patients who recover from sarcoidosis regain tuberculin sensitivity. It has been known for many years that patients with active sarcoidosis do not develop or cannot sustain sensitivity to tuberculin. This has been attributed to an immunologic defect induced by the disease. The present study has demonstrated that patients who recover from sarcoidosis, rather than regaining tuberculin sensitivity, show an absent or weak and transient response to the test. Thus it would appear that the same immunologic defect which characterizes the active phase of sarcoidosis is carried over into the recovery phase of the disease.

That the persistence of an immunologic defect is the result of damage from sarcoidosis is a possibility. However the authors assert that such a hypothesis does not appear tenable. The patients who recovered showed no classical or x-ray residual, and 10 of them who were given Kveim tests showed no response.

The significant outcome of this study is an alternative hypothesis advanced by the Jefferson physicians to the effect that the abnormal tuberculin reaction of the sarcoidosis patient, rather than being caused by an immunologic defect induced by the disease, is in fact the result of a constitutional defect which precedes the onset of the disease and indeed is a prerequisite for it.

To support that concept of a preexisting immunologic defect, accurate information concerning the tuberculin reactions of patients before the development of sarcoidosis is quite necessary. Unfortunately, there is a paucity of data on this subject and what little there is lacks consistency. In the Jefferson study, records of prior tests were found on only four patients. The authors quote several references in the literature which affirm the occurrence of positive tuberculin reactions before the onset of sarcoidosis. However they assert that though patients who have the disease or have recovered from it are capable of reacting to tuberculin, the reaction is weak and transient. Thus, the demonstration of a positive reaction at some time before the onset of sarcoidosis does not eliminate the possibility of an immunologic defect.

Editorials continued...

In support of their theory, the authors tell of encountering three patients with sarcoidosis who gave histories of unsuccessful B.C.G. vaccinations. They quote a report which told of the development of sarcoidosis in eight patients who had been vaccinated with B.C.G. from one to eight years earlier, and in whom the tuberculin reactions either were negative from the start or became negative. Also, the children of a brother and sister who had sarcoidosis were found to have negative reactions to tuberculin, despite histories of B.C.G. vaccination.

The authors point out that further studies must be made of the response to B.C.G. in the offspring of patients with sarcoidosis, and in persons who failed to convert during the extensive B.C.G. trials of the past. Such studies will either support or invalidate the hypothesis of a constitutional immunologic defect.

To one who has experienced sarcoidosis and its disabling consequences, any contribution that adds to our knowledge about this poorly understood malady is of great interest. It should be equally interesting to the inquisitive clinician.

THE TREATMENT OF BURNS

To anyone who is called upon to treat extensive burns, a report on the procedures used at the Hartford Burn Unit of St. Louis, by Dr. Carl A. Moyer, will be informative and stimulating.* It not only describes a new method of treatment but offers a new concept of the pathophysiology that accompanies a serious burn. Of all the injuries which a physician is called upon to treat, none offers a greater challenge than an extensive burn. Any contribution which results in a better understanding of the disturbed physiology and offers a new method of therapy based on the physiologic alteration resulting from the burn deserves serious attention.

The author points out that following a burn, the damaged skin and the tissues beneath it soon swell, and it is known that the swelling is due to fluid containing chiefly sodium salts and a small amount of serum protein. This swelling has been attributed to seepage from the capillaries in the region of the injury. Though this explanation appears logical, Moyer regards it as untenable, for normal capillaries are freely permeable to water and ions. The shock attendant upon large burns has been ascribed to the loss of blood plasma in consequence of the swelling of burned tissues, and on that premise plasma transfusions have been the accepted therapy for burn-shock.

It is acknowledged that there is evidence pointing to leakage from blood vessels in the region of a burn, for radioactive plasma proteins injected into the general circulation collect into the area of injury. However this is not thought to be the major physiologic change. In the injured tissues there are great numbers of fibrous macromolecules which have large surfaces through which water and ions are normally absorbed to enter into the molecular structure of the tissue. The question is raised, "Could not the heating of these molecules increase their adsorption of water and ions, and result in swelling of the organ without blood vessels becoming leaky?" In support of this thesis is the outcome of an experiment in which scalded skin taken from a rat's tail immediately after the injury was weighed, and then inserted aseptically beneath the abdominal skin of the rat. This damaged and transplanted skin gained as much as 45 per cent of its original weight in four hours, despite the fact that it was not connected to a single blood vessel. By contrast, unscalded skin from a rat's tail, treated in like manner, gains only about 25 per cent of its original weight in four hours.

These experiments showed that "physical-chemical alterations taking place within vascularly-deprived and vascularly-isolated, thermically-injured skins affect their taking up of large quantities of salts and water. These are factors that could be a major cause of burn swelling and of burn-shock." They also would appear to indicate that some of the burn-swelling may be due to partial vascular isolation within and beneath the burned skin, rather than to increased vascular permeability, or of endocrine or nervous system influence.

The author postulates that much of the physiologic derangement in burns is related to the direct cellular effects of sodium deficit upon unburned tissues—that isoosmolar sodium deficit in tissues other than blood is the important factor in the genesis of burn-shock, rather than a reduction of the minute-volume flow of blood secondary to a deficiency in the volume of blood. This hypothesis is substantiated by three years of experience at the Hartford Burn Unit of St. Louis in the treatment of burn-shock. During this period, the treatment has been carried out *only* with lactated Ringer's solution (the pH adjusted to 8.2) to meet the sodium deficit in uninjured tissue caused by the loss of fluid and of ions in the burn wound.

The St. Louis study was restricted to cases of deep burns covering 40 per cent or more of the body surface. During the three-year period, patients in burn-shock were given no glucose solution, no plasma, no dextrose, no blood (except for one patient), and no water. Even in convalescence, patients were given no pooled or stored plasma, no dextrose and no diuretic. Even though treatment for shock was limited to the administration of Hartman's solution, there was not a single death

* Moyer, C. A.: Treatment of burns. TRANSACTIONS AND STUDIES OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, 33:53-103, (Oct.) 1965.

from shock. No patient developed renal insufficiency, and not a single tracheotomy was performed, despite the fact that burns of the face and neck were common. Pulmonary edema did not occur though quantities of lactated Ringer's solution far in excess of the Evans or Brooke estimated requirements were given. Venous pressures were measured hourly during intravenous infusion, and frequent electrolyte determinations were made. In infants and children, these were done every hour or two during the critical period.

According to Moyer, the volume of solution required to treat burn-shock is difficult to estimate in any given case, for the amount needed varies greatly. In seven out of 10 cases, it exceeded the amounts considered safe under previous standards by 30 to 200 per cent, and in one infant by 400 per cent. The rule that he proposes is to give lactated Ringer's solution during the 24 to 36 hours after the burn, and to give it rapidly enough to keep the patient comfortably alive, excreting urine and mentally oriented, but not so fast as to raise the central venous pressure significantly above normal. In the first 24 hours post-burn, it was not unusual to give 10,000 to 15,000 ml. of solution to an adult, and one four-day-old infant was given almost 3 L. of Hartman's solution intravenously during the first day.

Besides correcting electrolyte imbalance and fulfilling fluid requirements, the St. Louis group utilized a continuous thermo-pack wet dressing containing a 0.5 per cent solution of silver nitrate as a bacteriostatic agent. The dressings were changed once or twice daily, and were kept dripping wet through the addition of 0.5 per cent silver nitrate solution every three or four hours. The wet dressing was covered with dry cotton sheeting in order to minimize evaporation and loss of heat through the dressing. Thus the thermo-pack dressings saturated with silver nitrate solution conserved body water, were bacteriostatic and helped to control evaporational heat loss.

Another thing that the Burn Center did was to give baths in Locke's solution for two to four hours from one to three times each week. According to Moyer, deep burns covering as much as 85 per cent of the body surface can be cleared of eschar by the twentieth post-burn day, and it can be done without pain, without bleeding and without anesthesia. According to the author, the Locke's solution bath is now an important facet in the therapy of burns. It is used to hasten the separation of eschar, to provide painless exercise of burned extremities, and to prevent immobilization of joints and atrophy of disuse of muscles. He points out that vital tissues are preserved by the gentle removal of eschar in Locke's solution, rather than by surgery. Even in deep burns, he says, it was not unusual to find islands of viable skin that served as bridges for the resurfacing of the burn wound.

With the use of silver nitrate dressings, septicemia did not occur with any burn. Though silver nitrate is not bacteriostatic to all organisms, it is particularly so for Staphylococcus aureus, hemolytic Streptococci, and in most cases Pseudomonas and Escherichia coli. There is much less shedding of organisms in the Locke's solution bath, from patients treated with 0.5 per cent silver nitrate, than from those treated with occlusive dressings, or with continuous saline baths, or from patients whose burns have been left exposed to the air.

Grafting is started after removal of the eschar. Strips of graft taken with the Castroviejo dermatome are placed in checkerboard pattern upon uninfected granulation tissue, and are immediately covered with the silver-nitrate dressing. Moyer says that by these technics full-thickness burns covering 40 to 70 per cent of the body have been completely resurfaced in 70 to 100 days from limited donor sites, such as from the legs below the knees.

Moyer emphasizes that the use of dressings wet with 0.5 per cent aqueous solution of silver nitrate is dangerous, chiefly because of the hypotonicity of the solution. The dressing becomes a sink into which the diffusable mineral constituents of the body move through the burn wounds.

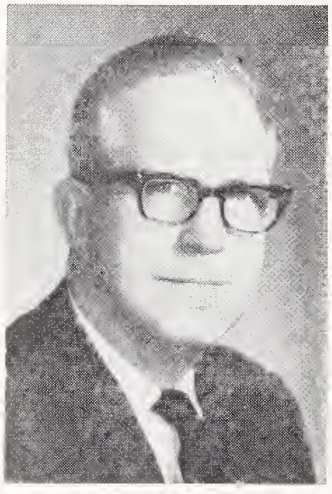
Of unusual interest was a patient with a serious burn who developed a massively-bleeding Curling's ulcer and had to have a gastric resection. Though the abdominal incision was made through a granulating surface devoid of epithelium, the wound healed per primum.

In the St. Louis series of deep thermal burns covering 40 to 90 per cent of the body surface, the mortality rate was 33 per cent, whereas the expected mortality in patients with that degree of injury was 81 per cent. There were no deaths that could be ascribed to sepsis. Moyer attributed all deaths to metabolic derangements consequent to a lack of experience with the method of treatment.

Judging by the results reported by Moyer and his group, the physician who is called upon to treat patients with serious burns is obligated to familiarize himself in detail with the technics that they are employing.

The meeting room for the U. of I. College of Medicine's social hour at the annual AMA meeting in Chicago has been changed because of a scheduling problem. The social hour will be held in the Avenue West Room of the Pick-Congress Hotel on Tuesday, June 28, from 4:00 to 6:30 p.m. All Iowa physicians and their wives are invited to attend.

President's Page



July 1, 1966, is a date that few physicians anticipate with any pleasure, for it is the day when Medicare will start. Yet, it is nearly upon us, and we must be prepared.

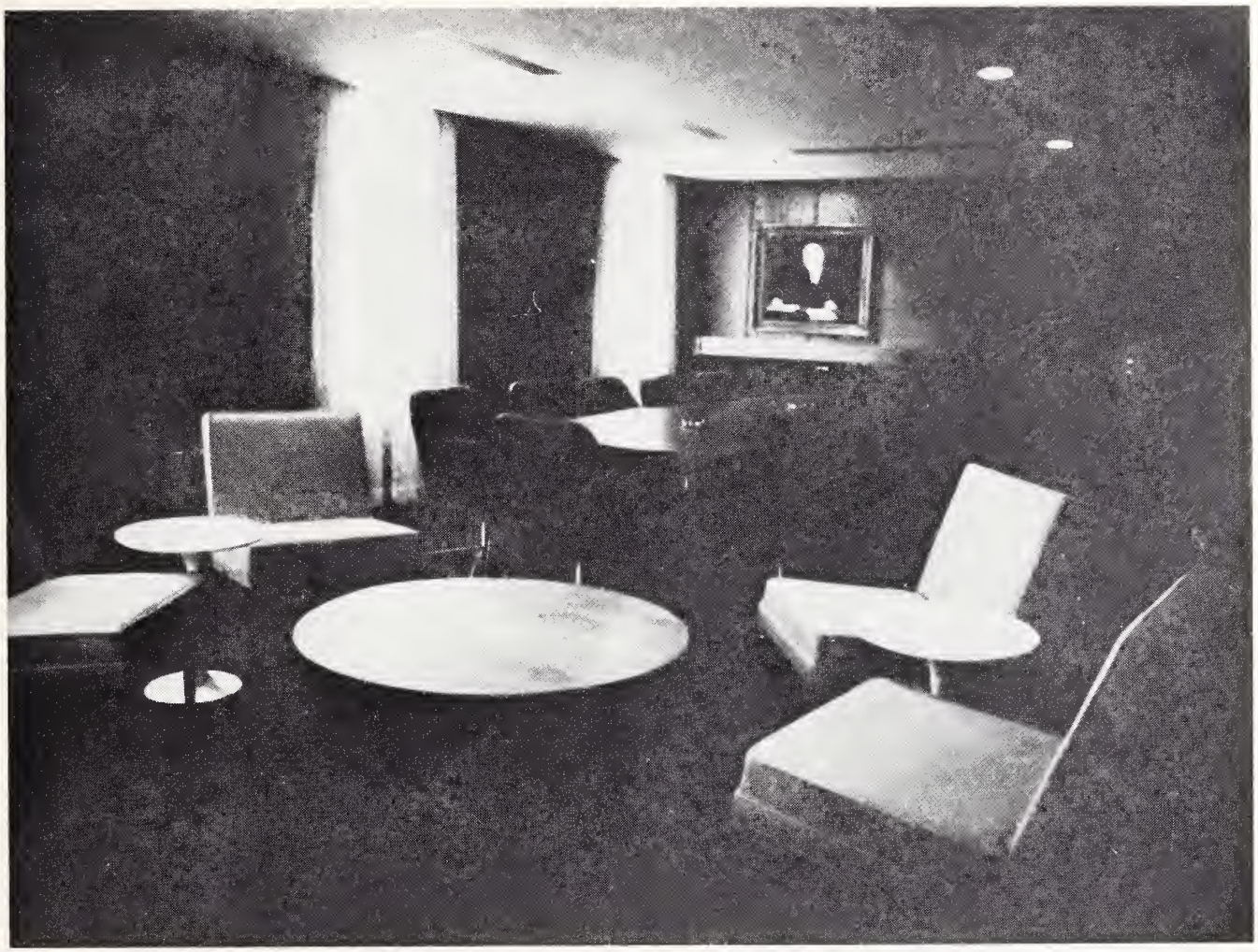
Iowa Medical Service (Blue Shield), the carrier for Part B, PL 89-97, with assistance from the Iowa Medical Society, is conducting a large number of identical district meetings to inform physicians and their secretaries about the procedures they are being asked to follow. The schedule was published on the "green sheet" in the May issue of the JOURNAL. Doctors who haven't yet attended one of them should consult that listing, and if the meeting at the location nearest to them has already taken place, they are urged to attend another, and to urge their employees to do likewise.

Our elderly patients are sure to have many questions about the provisions of PL 89-97, both before and after July 1. The Social Security Administration suggests that questioners be referred to its offices, except when their questions have to do with claims, and then they should be referred to the carrier.

Each of us, of course must do his best to make the scheme work smoothly, so that the medical profession and other health-care workers will not be held responsible for any confusion or for the disruptions of service that are bound to occur. Moreover, as difficulties arise, our medical societies and our Woman's Auxiliary can play important roles by helping to inform the public as to what medicine's responsibility truly is, in the implementation of this federal health scheme.

D. P. Leinbach

President



The Walter L. Bierring Memorial Room at the new IMS headquarters. The accompanying address by Dr. Julian M. Bruner was delivered at its dedication.

A Tribute to Walter Bierring Iowa's Winston Churchill

Julian M. Bruner, M.D.
Des Moines

It was said of Sir Winston Churchill that one of his great regrets was that he could not witness the splendid spectacle of his own funeral. By the same token, if Walter Bierring were alive today and had been asked to speak at this dedication ceremony, he would have written a note of acceptance in the sweeping Spencerian script for which he was famous, and he would have spoken with his usual charm, and without notes.

These two great men, who lived through almost exactly the same period of history, shared many qualities besides the ability to speak eloquently. They both rejected physical discomforts. Churchill treated his chronic lumbago by "ignoring it," as Dr. Bierring accepted his limitations in walking. Both men seemed to welcome the dangerous life incident to flying thousands of miles, and Dr. Bierring loved to tell of the thrill of being under rifle fire in Bierut, where he flew in his late 80's to give a paper on Billroth. Both men had a historical perspective which enabled them to see disturbing current events in their true light, and both had myriads of friends, at home and abroad.

A native son of Iowa, of pure Danish extraction, Walter Bierring was an early graduate of the University of Iowa School of Medicine. Imbued with an insatiable curiosity to learn about all that was newest and best in medicine, he went to Europe in the early 1890's, just as modern scientific medicine was emerging, and there he came into personal contact with the great men of that epoch —Pasteur, Koch, and many others. I believe it was his early contact with the genesis of modern medicine which gave him the vision and the foresight that enabled him to achieve so much in later life.

Dr. Bierring's activities and accomplishments in medicine were almost too numerous to mention, and many of them are familiar to you. I should like to speak briefly of only two facets of his life.

Dr. Bierring had two fine daughters, Mrs. Florence Hutchinson and Mrs. Elza Radoff, who have graced this dedication ceremony with their presence. But he also had many sons, young medical men who were stimulated and inspired by his example of excellence and accomplishment. He was always giving letters of introduction to these young men so that they could meet his eminent medical friends in this country and in Europe. I was one of the host of young men to whom he was so generous, and may I speak for all by saying that we revere his friendship.

Even in later years, Dr. Bierring never seemed "old," for he "thought young" and he "lived young." He relished a fast spin in a convertible with the top down, and by that means of travel he made his way, with a young medical friend, to the Iowa Medical Society meeting in Davenport one year. He had a quality that transcended the decades of age difference. In his presence, one had the comfortable feeling that he was an old college classmate.

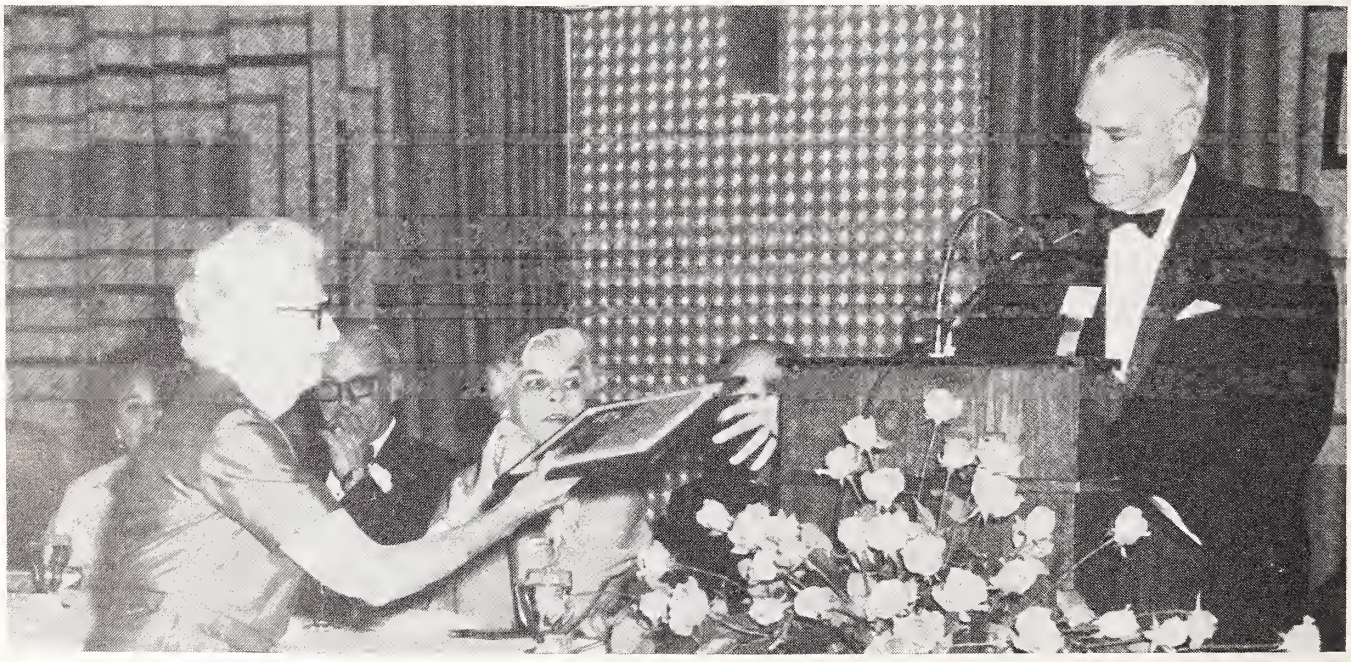
Finally, Dr. Bierring made a gift to each one of us who knew him. Just as Winston Churchill brought the best traditions of the Victorian Age to the 20th Century, so Walter Bierring transmitted to all who knew him a personal and tangible contact with the Listerian age of medicine. He made us feel that we too had attended the surgical clinics of Billroth, and had listened to the lectures of Louis Pasteur. Our finest tribute to him would be to carry forward the Olympic flame that he handed to us, representing all that is best in medicine.

German Measles Vaccine

The development of the first effective experimental vaccine against rubella (German measles) by two scientists of the Public Health Service's National Institutes of Health was publicized on April 27. The announcement followed a joint report by the developers of the vaccine, Dr. Harry M. Meyer, Jr., and Dr. Paul D. Parkman, both of the Division of Biologics Standards, to their scientific colleagues at the Atlantic City meeting of the American Pediatrics Society.

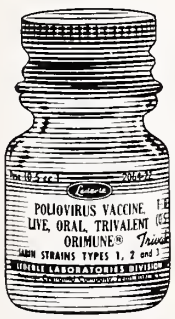
Surgeon General William H. Stewart, in commenting on the discovery, said: "The clinical data obtained to date are very encouraging. The results with this newly developed experimental vaccine make it possible to predict that rubella and its associated birth defects can be brought under control in the not too distant future. Until now, experimental live rubella preparations have caused typical rubella, and the infection was communicable to uninoculated contacts."

Working with the Department of Pediatrics of the University of Arkansas Medical School and the Arkansas Children's Colony, the two pediatrician-virologists gave the vaccine to eight rubella-susceptible children. The children developed immunity with no accompanying fever or rash, and of equal importance, none of their eight playmates, also rubella-susceptible, were infected. On the basis of these encouraging findings, 26 more children were then inoculated with the attenuated vaccine, and were in contact with 22 uninoculated susceptible playmates. Again the same satisfactory results were obtained.



Mrs. Lee F. Hill, of Des Moines, is shown accepting the first B. T. Whitaker Teaching Award on behalf of her husband, Dr. Hill, at the 1966 annual banquet of the IMS. Dr. D. C. Conzett, of Dubuque, who presented it for the Interstate Postgraduate Medical Association of North America, had been given an IMS Merit Award earlier in the program, in recognition of his outstanding service to organized medicine. Dr. Whitaker, of Boone, is a member of the Board of Trustees of the Interstate Association, and a past-president of the IMS.

Doctor...two important Lederle products for routine office procedures

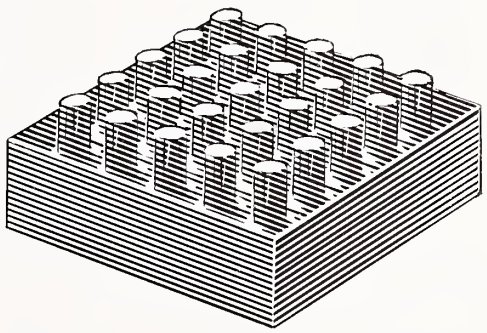


single-dose vials for convenient and economical polio immunization

ORIMUNE®
POLIOVIRUS VACCINE, LIVE, ORAL
TRIVALENT
SABIN STRAINS, TYPES 1, 2 and 3

Fast, simple administration—and economy for the patient—make the new 0.5 cc single-dose vial of ORIMUNE Trivalent ideal for private practice. (Packaged 5 to a box with 5 sterilized disposable droppers for your convenience).
(Also available in 2 cc and 2 drop dosage forms).
Only 2 doses required for complete, initial immunization for patients more than a year old.

Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic side effects have been reported. There are, however, certain contraindications. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.
In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.
Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months). Booster immunization: one dose, given orally. See package literature for full directions.



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Comparable in accuracy and reliability to older standard intradermal tests*, but faster and easier to use. Since TINE TEST is relatively painless it should receive greater patient acceptance. Results are read at 48-72 hours. The self-contained, completely disposable unit requires no refrigeration and is stable for two years.
Side effects are possible but rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. Available in boxes of 5 (new individually-capped unit); cartons of 25.

*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 605·6·3390 Lederle

THE JOURNAL *Book Shelf*

BOOKS RECEIVED

NURSING AND RETIREMENT HOME ADMINISTRATION, edited by *H. Lee Jacobs,* Ph.D., and *Woodrow W. Morris,* Ph.D. (Ames, The Iowa State University Press, 1966, $3.95).

PREIMPLANTATION STAGES OF PREGNANCY, edited by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I., Biol., and *Maeve O'Connor,* B.A., Ciba Foundation Symposium (Boston, Little, Brown and Company, 1966, $13.50).

TRANSCULTURAL PSYCHIATRY, edited by *A. V. S. DeReuck,* M.Sc., D.I.C., A.R.C.S., and *Ruth Porter,* M.R.C.P., Ciba Foundation Symposium (Boston, Little, Brown and Company, 1966, $12.00).

SYNOPSIS OF OBSTETRICS, by *Charles E. McLennan,* M.D. (St. Louis, C. V. Mosby Company, 1966, $6.85).

FERMENT IN MEDICINE, by *Richard M. Magraw,* M.D. (Philadelphia, W. B. Saunders Company, 1966, $6.50).

BLOOD DISEASES OF INFANCY AND CHILDHOOD, by *Carl H. Smith,* M.A., M.D. (St. Louis, C. V. Mosby Company, 1966, $22.00).

BOOK REVIEWS

DUPUYTREN'S CONTRACTURE, by *J. T. Hueston,* M.S. (Melb.), F.R.C.S., F.R.A.C.S. (Baltimore, The Williams & Wilkins Company, 1966, $7.25).

This book is based on the study of Dupuytren's contracture in Australia, where the author is a plastic surgeon in the Royal Melbourne Hospital. It is the first complete and authoritative work to appear on this subject since the monograph of the Swedish surgeon Tord Skoog, in 1948.

The incidences of "20 per cent of males over age 60 and 40 per cent of males over age 80" in Australia makes this subject of considerable importance there. Here in the U. S., the incidence is somewhat less. Only the white race is subject to this condition, and its cause is not yet understood.

Historical aspects, incidence, pathology, Dupuytren's diathesis, relation to injury, and treatment are discussed in successive chapters. The author's style is eminently readable, and the text is illustrated with photographs of exceptional quality.

A frank and critical appraisal of surgical treatment is made. Strict guidelines are laid down for the selection (or rejection) of patients for surgery, and for the selection of the surgical procedure applicable to patients in the various stages of Dupuytren's disease. The various complications following surgery are described to emphasize the danger of the routine application of surgical treatment.

This reviewer can find only praise for this informative work, the thesis of which was presented as an oration for the Royal College of Surgeons in which the author is a Hunterian Professor. Every medical library should have this book for reference, and surgeons who treat this condition should read it for instruction and sound advice.—*Julian M. Bruner,* M.D.

SYMPOSIUM ON THE LENS, *John E. Harris,* chairman (St. Louis, C. V. Mosby Company, 1965, $18.50).

This is a symposium sponsored by Visual Sciences Study Section and the University of Minnesota.

The first chapter, on the history of cataracts, was written by Dr. C. Wilbur Rucker, of the Mayo Clinic. In his introductory remarks, Dr. Rucker states that the nature of the following papers is such that he can scarcely understand the titles.

Unfortunately this reviewer had the same feeling about the book, and while it is undoubtedly a valuable contribution to research on the lens, it would not be of much interest to any practicing ophthalmologist.—*Henry H. Gurau,* M.D.

Col. Ted Mikesch, chief, Iowa Highway Safety Patrol (right), and Lt. Col. James Machholz, assistant chief, accepted the Washington Freeman Peck Award, on behalf of their organization, at the IMS annual banquet. Dr. Peck was one of the founders of the medical school in Iowa City. The citation said, in part, "in recognition of the Highway Patrol's efforts to save lives and alleviate human suffering, and . . . its . . . cooperation with individual physicians and organized medicine. . . ."

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown® (meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

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Iowa Chapter of the American Academy of General Practice

Spring Postgraduate Conference

New Inn, Okeboji, Iowa
June 16, 17, 18, 1966

In cooperation with the Eli Lilly Educational Seminar Program, and the Iowa Heart Association, the Iowa Chapter of the American Academy of General Practice will present its Spring Postgraduate Conference at the New Inn, Okoboji, Iowa, on June 16, 17, 18, 1966. All physicians are invited and encouraged to attend. There is no registration fee. The entire program is accredited for 11½ hours for Academy members. Lectures will be given only in the mornings, leaving the balance of the days free for relaxation with your family. Make your reservations with the New Inn now.

THURSDAY, JUNE 16
(HEART DAY)

"A Medical Approach to Surgical Cardiac Disease"—Donald Warkentin, M.D., Iowa City
"Some Current Problems in Cardiac Surgery"—John B. Flege, M.D., Iowa City
"Unusual Manifestations of Ischemic Heart Disease"—Stewart Nunn, M.D., Rochester, Minnesota
"The Assessment and Management of High Coronary Risk"—Henry Blackburn, M.D., Minneapolis

FRIDAY, JUNE 17

"Abdominal Uterine Bleeding"—William L. Rumbolz, M.D., Omaha
"Complications of Antibiotic Therapy"—William J. Martin, M.D., Rochester, Minnesota
"Common Urinary Problems in Childhood"—Edward M. Malashock, M.D., Omaha
"Cancer of the Larynx and Pharynx"—Robert J. Richardson, M.D., Minneapolis
"Subarachnoid Hemorrhage and Intracranial Aneurysm"—A. L. Sahs, M.D., Iowa City

SATURDAY, JUNE 18

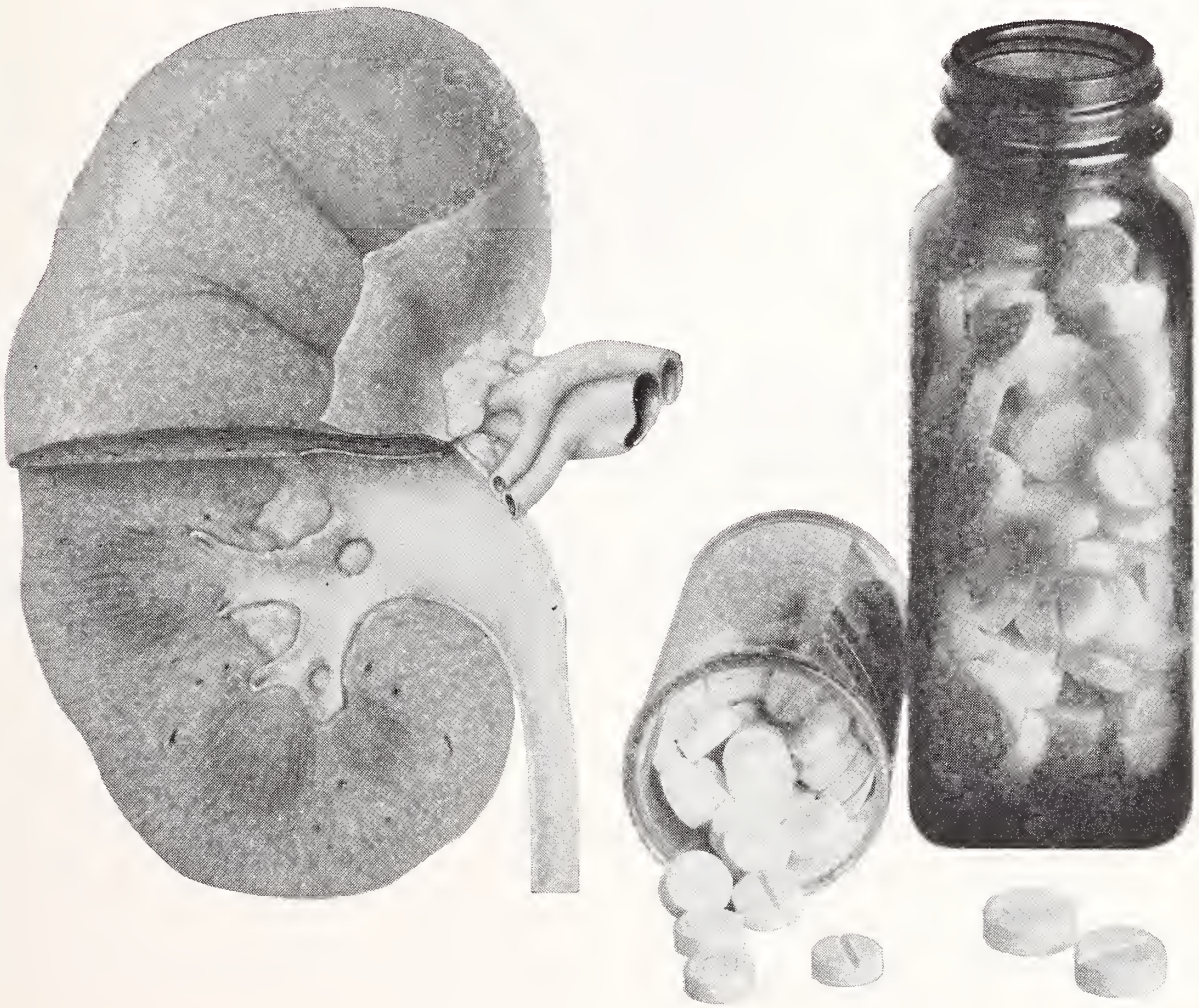
"Common Urologic Emergencies"—Dr. Malashock
"Complications of Meningitis"—Dr. Sahs
"Meniere's Syndrome, Its Diagnosis and Treatment"—Dr. Richardson
"Bacteremic Shock"—Dr. William J. Martin
"Here Is My Problem—What's Yours?"—Dr. Rumbolz

AAGP State Officers Conference

The American Academy of General Practice held a State Officers Conference in Kansas City on May 7 and 8. Dr. Rodney R. Carlson, of Ankeny, appeared on the program, presenting "Residency Training Contents and Benefits—A Critique." Mrs. Isabelle Wandling, of Des Moines, executive secretary of the Iowa Chapter, moderated one of the afternoon programs. Dr. Elmer M. Smith, of Des Moines, appeared on the program speaking as Chairman of the Commission on Legislation and Public Policy. Other members of the Academy attending from Iowa were Dr. Raymond F. Frech, of Newton; Drs. George A. Kern, Jr., and Donald H. Kast, of Des Moines; Dr. William A. Castles, of Dallas Center, and Dr. Lee Rosebrook, of Ames.

At the IMS annual banquet, Mr. C. Aubrey Gates (right), director of field services for the American Medical Association, and Mr. Frank Woolley, the AMA field representative who works most closely with the IMS, received special recognition awards, in acknowledgement of their outstanding performances in behalf of organized medicine.

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

BLUE SHIELD:
Outpost of Medical Freedom

Physicians' independence can only be lost through medical economics. When large numbers of people cannot afford care, they will turn increasingly to the federal government for medical security.

Blue Shield is the finest voluntary instrument known for making necessary medical and surgical care available to large numbers of people at a price they can afford.

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Your BLUE SHIELD Plan

LIBERTY BUILDING DES MOINES, IOWA

Iowa Association of Medical Assistants

"Learning Builds Earning"

These words headlined the announcement of the annual meeting of the American Association of Medical Assistants to be held in St. Louis on October 19-23.

It has been suggested that we might like to combine business with pleasure and make the convention part of our vacation plans. The Missouri medical assistants have made great plans for a gala celebration of the tenth anniversary of AAMA. Details of the educational program of lectures, forums and workshops will be announced later. Pre-convention activities begin October 18 with a tour (via miniature trains) of Grant's Farm. This 281-acre site includes a wildlife preserve and a small zoo, in addition to other points of interest. Supper, a Dixieland jazz band and real old-fashioned melodrama will be presented Tuesday evening aboard the Goldenrod Showboat—a real Mississippi paddlewheeler.

The commemorative Gateway Arch, Busch Memorial Stadium, St. Louis Municipal Opera and Art Museum, St. Louis Zoo, and beautiful Lake Ozark are among the sights we shall want to see in and around St. Louis.

Wyeth Laboratories will sponsor a symposium on Medicare as part of the educational program. If your chapter has not had a speaker explaining Medicare, or if you were unable to attend the recent IAMA meeting in Des Moines where it was discussed, plan now to include this AAMA meeting in your plans for the fall.

Remember—St. Louis, October 19-23 for facts and fun.

HELEN G. HUGHES

Coming Up for You

The Eighth Annual In-Service Workshop for Medical Assistants will be held on the campus of Iowa University this fall, on October 2 to 5, inclusive.

The Iowa Center for Continuation Study sponsors this workshop in cooperation with the Iowa Association of Medical Assistants and the Iowa Medical Society, to provide practical information about the general procedures for organizing and performing the business and routine office activities of the modern medical office.

Watch for the brochure and registration form which will be mailed to all members of the Iowa Medical Society and to IAMA members.

Component Chapter Presidents

BLACK HAWK ASSOCIATION:
Miss Waneta Christensen
2305 Rownd St.
Cedar Falls, Iowa

DES MOINES CHAPTER:
Mrs. Barbara Plecas
1419 Woodland
Des Moines, Iowa

FORT DODGE DISTRICT:
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Mrs. Pauline Tappan
3214 Garretson Ave.
Sioux City, Iowa

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Morbidity Report for Month of April, 1966

Diseases	1966 Apr.	1966 Mar.	1965 Apr.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	1085	1099	419	Bremer, Hancock, Johnson, Polk
Typhoid fever	1	2	0	Lee
Smallpox	0	0	0	
Measles	1580	1103	936	Black Hawk, Bremer, Floyd, Lee, Scott
Whooping cough	21	5	2	Bremer, Grundy, Marshall
Brucellosis	2	4	4	Boone, Lucas
Chickenpox	1016	1386	507	Dubuque, Polk
Meningococcal meningitis	2	7	1	Linn, Warren
Mumps	551	936	526	Clayton, Dubuque, Pottawattamie, Warren
Poliomyelitis	0	0	0	
Infectious hepatitis	44	61	102	Black Hawk, Des Moines, Dubuque, Montgomery
Rabies in animals	21	20	27	Allamakee, Hardin, Story
Malaria	0	1	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	29	25	20	For the state
Syphilis	94	88	52	For the state
Gonorrhea	275	239	157	For the state
Histoplasmosis	5	4	2	Black Hawk, Cerro Gordo, Linn, Muscatine, Wapello
Food intoxication	1	0	0	Mitchell
Meningitis (type unspec.)	1	2	0	Poweshiek
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	14	13	9	Linn
Tetanus	0	0	0	
Chancroid	1	0	0	Pottawattamie
Encephalitis (type unspec.)	1	2	0	Clay
H. influenzal meningitis	3	2	0	Black Hawk, Guthrie, Lucas
Amebiasis	2	0	0	Boone, Buchanan
Shigellosis	1	6	0	Warren
Influenza	4074	744	260	Entire state

Congenital Syphilis

The following was taken from a report of the Florida State Board of Health, April 8, 1966.

The reappearance in Florida of a tragic and completely preventable condition—congenital syphilis—causes serious concern. Once a common disease, syphilis of the newborn had virtually disappeared by the late 1950's. Then in 1960, ten cases were reported. The following three years saw an average of 30 cases each. During the six-month period, October, 1965, through March, 1966, 14 additional cases have been found and five of these were reported in a single month. Of those 14 infants, two died shortly after birth, and 12 will suffer the results of this "intolerable disease" for the remainder of their lives.

Two of the 14 mothers were known to be infected with syphilis and had been treated for it. Later in pregnancy each was named as a contact to infectious syphilis, but the positive blood tests demonstrated at that time were misinterpreted as "sero-fast" reactions. The possibility of re-infection was overlooked. Three additional mothers were known to be sex partners of persons with infectious syphilis, but were not given preventive treatment. Four of the remaining nine mothers had had blood tests taken early in pregnancy which were negative; five were not examined at any time in pregnancy for evidence of syphilis.

These findings emphasize that a single blood test early in pregnancy is inadequate for preventing syphilis of the newborn. Expectant mothers should have at least two tests: one during the third month, and a second during the seventh month of pregnancy. This one procedure would have detected the infection in these mothers, and the tragic results of congenital syphilis would have been prevented.

A high proportion of persons with known exposure to an infectious stage of syphilis (primary or secondary stage) will themselves develop the infection. A single injection of penicillin (or adequate doses of some other antibiotic) will prevent it entirely. All persons with sexual exposure to one with infectious syphilis, and most particularly the pregnant female, should have preventive treatment.

Recommendations Regarding Timing of Live Virus Vaccines and Tuberculin Testing

POLIOMYELITIS VACCINE WITH SMALLPOX VACCINIA

In the past it had been recommended that oral poliovirus vaccine and vaccinia be given separately. The American Academy of Pediatrics, Committee on Control of Infectious Diseases, published a Supplementary Statement on Oral Poliovirus Vaccines, to its 1964 RED BOOK, on October 25, 1964, saying: "There is now evidence (SOUTH AFRICAN MED. J., **37**:513-515, 1963) that safe and satisfactory immunization with vaccinia and oral poliovirus vaccine may be achieved when the two vaccines are given at the same time, . . ."

Therefore, past contraindications to administering both of these live virus vaccines within 30 days of each other are no longer valid.

MEASLES VIRUS VACCINE WITH EITHER POLIOMYELITIS VACCINE OR SMALLPOX VACCINIA

"Until further data are available, simultaneous administration of live measles vaccine with live attenuated poliovirus vaccine or smallpox vaccination should be avoided. A minimum interval of one month is recommended." (American Academy of Pediatrics, 1964 RED BOOK, Page 10.)

MEASLES VIRUS VACCINE, LIVE ATTENUATED, AND TUBERCULIN TESTING

The validity of negative tuberculin tests in children who have received a "live" virus measles vaccine within 30 days of the test should be questioned. Therefore, it is recommended that children who have received "live" virus measles vaccine not be tuberculin tested for at least 30 days. Conversely, measles vaccine may be administered at any time after the reaction to the tuberculin test is observed. Although the administration of measles vaccine may affect the validity of the tuberculin test, there is no evidence that the tuberculin test in any way affects the immunization properties of the measles vaccine.

Summary. Measles vaccine "live" attenuated should not be given within 30 days of either of the two other live-virus vaccines (poliovirus and vaccinia). Tuberculin tests should not be given sooner than 30 days after measles vaccine, but measles vaccine can be given immediately after the "reading" of the tuberculin test, or approximately one week after the vaccination.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

Tests for Phenylketonuria (PKU)

Pursuant to the authority conferred in section 135.11, subsection 17, Code of Iowa, 1962, and Chapter 157, Acts of the 61st General Assembly, the following rules and regulations relating to the testing of infants for phenylketonuria are adopted.

Section 1. (135) Time sequence for phenylketonuria tests.

A test for phenylketonuria should be done preferably forty-eight hours after first feeding but in any event immediately prior to hospital discharge. A second test should be done at about four weeks of age.

Sec. 2. (135) Blood or serum.

The test should be a phenylalanine blood or serum test.

Sec. 3. (135) Requirements for approval.

The State Department of Health will approve any laboratory to perform laboratory tests for phenylketonuria provided that such laboratory meets the following criteria.

3.1 The laboratory director agrees to perform the inhibition assay method of Guthrie and/or a standard quantitative phenylalanine blood test for phenylketonuria on the request of any licensed physician, and (a) or (b):

a. The laboratory is supervised by a pathologist either full-time or part-time who is certified by the American Board of Pathology, or

b. The laboratory is appraised by the State Hygienic Laboratory under a quality control program to perform either one or both of the designated tests. Positive indication of intent to participate must be made by July 1, 1966, to the State Hygienic Laboratory, State University of Iowa, Iowa City, Iowa.

3.2 The laboratory performs tests on a minimum of twenty-five infants per week and reports of the number of tests performed are made quarterly to the State Hygienic Laboratory.

3.3 Reports of positive results are made immediately to the State Department of Health, State Office Building, Des Moines, Iowa.

Sec. 4. (135) Quality control program.

It is recommended that those laboratories supervised by a part-time or full-time board certified pathologist participate in the quality control program of the State Hygienic Laboratory.

Sec. 5. (135) Information available.

Guidelines available upon request to the State Department of Health should be followed.

Woman's Auxiliary News

Inaugural Address, 1966

"Seek always to do some good, somewhere. Every man has to seek in his own way to make his own self more noble and to realize his own true worth. You must give some time to your fellowman. Even if it's a little thing, do something for those who have need of help, something for which you get no pay but the privilege of doing it. For remember, you don't live in a world all your own. Your brothers are here too."

If this quotation from Dr. Albert Schweitzer could become the essence of the activities in our Auxiliaries, we would indeed be carrying out and carrying on the dreams, efforts and tasks of our officers and members. These ideals would also help achieve the goals of the medical profession while advancing medical prestige and esteem.

To become influential, we must have unity of purpose and the ability to inspire this unity in our members. As our horizon broadens, we need more interested participants.

How do we increase participation? As I have visited with our councilors this past year, each one has said the same thing in her own personal context. The problem is one of time and energy, but if each member in the organized counties brought one potential member to an Auxiliary meeting, or if a member-at-large invited another doctor's wife to participate with her in some project, by the end of the year we would have doubled our membership.

But plans and words are not enough. Thoughtfully-planned, vigorous action determines success. We must not forget that part of our effectiveness lies, and rightly so, in service to community projects, and in promoting sound leadership in these activities.

As we look back on the Auxiliary's accomplishments, we are grateful for the sound foundation built by our previous leaders. The Auxiliary is a continuing organization, and precedents are only as good as their service to present needs, but loyalty to a firmly founded organization stimulates its leaders to improve the organization. An active membership reveals talent in its members, and promotes leadership by talent rather than by connivance.

At this "changing of the guard," may I express my appreciation for the honor of serving as your president, and respectfully solicit your help for your Auxiliary's success.

See you often this year!

—Mrs. R. E. Hines, *President*

Mrs. R. E. Hines

Forty-Third Annual Convention
Woman's Auxiliary to the American Medical Association
June 26-30, 1966, Drake Hotel, Chicago, Ill.

A cordial invitation is extended to all members of the Woman's Auxiliary to the American Medical Association, their guests, the wives of AMA delegates, alternates and international guests, and guests of physicians attending the AMA convention to participate in all social functions and to attend the general meetings of the Auxiliary.

Also, don't forget the Pre-teen and Teenage convention program at the Knickerbocker Hotel in Chicago at the same time.

Report of Annual Meeting

The Sunday evening Dutch Treat Supper for Board members, husbands, and guests was well attended. The food was delicious and we enjoyed getting acquainted and renewing old friendships.

On Monday, the convention was officially opened with a business session, followed by a talk from Dr. S. P. Leinbach, president-elect of Iowa Medical Society and chairman of the Woman's Auxiliary Advisory Committee. His title was "Your Place in the Pattern." He briefly discussed doctor-patient relationships under Medicare, and pointed out our responsibilities for sustaining our individual freedoms.

The Monday luncheon was a well attended and interesting affair. Mrs. W. R. Hornaday, first chairman of the Nurses' Loan Fund, was the honored guest in celebration of the 25th anniversary of H.E.L.F. A panel discussed "Planning, Participation and Progress." The history of the Fund, presented by Mrs. B. F. Kilgore, and pictures of the panel will appear in our next issue. Dr. Laura C. Dustan, dean of the College of Nursing, University of Iowa, was the speaker. Mrs. D. W. Coughlan did a terrific job organizing and presenting a style show of foreign costumes. It is written up in considerable detail in this issue.

During Tuesday's morning session, Mrs. Asher Yaguda, president-elect of Woman's Auxiliary to the AMA, was the first speaker. Portions of her excellent talk are also carried in this issue of WOMAN'S AUXILIARY NEWS. Mr. Frank Woolley, of the AMA Field Service Division, made us all sit up and take notice with his candid talk on politics. He certainly inspired each of us to do her part for free enterprise, so as to protect herself, her husband's profession and her nation. Mr. Fred Kelly gave us a brief talk on Homebound Handcraft activities.

The officers were then elected, and Mrs. Asher Yaguda conducted the installation. Pictures of the Executive Board will appear in the next issue.

The Tuesday luncheon had more beautiful table decorations and favors. Our compliments to the committee who made all the arrangements for the different functions during this annual meeting! The Essay Contest awards were presented by Dr. F. G. Ober, and the Voluntary Community Health Service award by Mrs. Olin Elliott. An account of the latter is included in this issue. Then U. S. Senator Jack Miller told us about his experiences in Viet Nam and his views on why we are there. Because of his recent, first-hand experiences, we found his talk very enlightening. As always, he was a delightful speaker.

The evening was filled with the reception for the new IMS officers and the banquet of the Iowa Medical Society. Following these, came Caduceus Capers, a benefit dance for the Health Education Loan Fund with music furnished by the orchestra of Don Hoy. It was well attended, and everyone had a delightful time. Abbott Laboratories supplied the door prize, a Golden Hour Clock, and it was won by your editor.

A Few of Mrs. Yaguda's Ideas

Following are the rather sketchy notes that I took during Mrs. Asher Yaguda's talk at our Annual Meeting. We hope to get a copy of it so that we can print the complete text in WOMAN'S AUXILIARY NEWS *within a month or two. Her suggestions are well worth considering.*—EDITOR

For the coming year, Mrs. Yaguda recommends what she calls "umbrella projects." These utilize committee structures that all of our Auxiliaries have. One of her favorites is Project No. 2, Health Education. Many films are available for use in teaching health subjects. The "Gems Program" includes activities such as Block Mothers and immunization clinics in schools. Alcoholism is a topic that is being considered for health education at the secondary-school level. She hopes we can get into the schools to review health-education programs with teachers.

We must maintain our voluntary services. Health services have increased by one-third since 1964, and there now are nearly 600 of them, but the majority of the new ones are federally sponsored. Mrs. Yaguda says that we must maintain the voluntary ones if health care is not to become just another governmental function. It is all right, she thinks, for voluntary projects to receive federal funds, as long as medical service does not come under governmental control.

At one time, in this country, each community took care of its poor on a person-to-person basis. Now that the government has taken over that responsibility, "welfare" has become big business.

Auxiliary work is elective and permissive, and is recommended by the American Medical Association.

We should like someday to be able to stop answering the question: "What does the Auxiliary do?" The obvious answer is for us to make the Auxiliary do enough so that no one will need to ask that question. Each of us must do her part!

REPORT OF THE CREDENTIALS COMMITTEE
1966 ANNUAL MEETING

Board members	42*
Delegates	26
Members	52
Past-presidents	5
Alternate delegates	4
Guests	37
Total for three days	166

* Includes 4 past-presidents who are members of the Board.

1966 Volunteer Community Health Service Award

There were four nominations for this award but one was too late to be submitted to the judges. The winner was Mrs. T. D. Murphy, of Bettendorf. She has spent 30 years of service in the Davenport community, melding the roles of wife, mother and civic servant.

The Parent-Teacher Association at St. Paul the Apostle School, Immaculate Conception, the Academy Mothers' Club, the Mothers' Guild of St. Ambrose Academy, the Girl Scouts and the United Fund are just a few of the organizations that have been benefitted from her efforts. She has served as president and secretary for the Guild of the Kahl Home, has worked in a public relations capacity for the Mental Health Association, and also has edited its newsletter for two years.

Mrs. Murphy also deserves some sort of award for never missing a scheduled meeting, despite the fact that she does not drive a car.

Her work at Mercy Hospital has reached hundreds of adults and children. As sewing chairman for the past 15 years, she created hand puppets for overnight patients in the pediatric department, and bed jackets and gowns for indigent patients. She has hemmed blankets, diapers, and nurses' uniforms, and has made draperies for the nurses' home.

Her name was submitted for this award by members of the Scott County Auxiliary.

"Happiness Is a Pretty Dress Anywhere"

Mrs. D. W. Coughlan used her ingenuity and created a very clever and entertaining style show for the Monday afternoon program during the Annual Meeting. She presented a terrific narration of each costume presented. She gathered foreign costumes from friends and acquaintances, and found doctors' wives to model them for her. She invited three foreign students to model their native costumes. They were Erla Axeldottir—Iceland; Angelica Vergaro—Chile; and Honie Ackterstraat—Holland. Miss Mary Constance Coughlan represented the United States in two different fashions.

In all, thirty different countries were represented. We have several doctors' wives in our area who were born in foreign countries, and they very graciously modeled their own native costumes. They were: Ann Matthews—Greece; Aurora Overton—Mexico; and Joon Jung Parks—Korea. Two of our local doctors modeled their native costumes. They were: Doctor Violet Poblacion—Philippines and Doctor Kum San Song—Korea.

Other doctors' wives who participated in the style show were: Matilda Vorisek, Jean Merkel, Frances Hines, Audrey Rosenberg, Jo Ghrist, Margaret Mater, Leona Zaharis, Mary Jo Peterson, Lisa Latchem, Charlotte From, Shirley Hertko, Phyllis Preston, Alice Young, Gretchen Rodgers, and Erlene Veverka.

News From Around the Hawkeye State

Black Hawk County

Mrs. Don Penly was hostess to members of the Black Hawk County Medical Auxiliary at her home in Cedar Falls on April 19. She was assisted by Mmes. Thomas Bairnson, John McCoy and Neil Williams. Mrs. Carl Hanson, chairman for the program, presented Mr. William Brown, executive director of Exceptional Persons, Inc., as guest speaker. His topic was "We Are Doing Something in Black Hawk County."

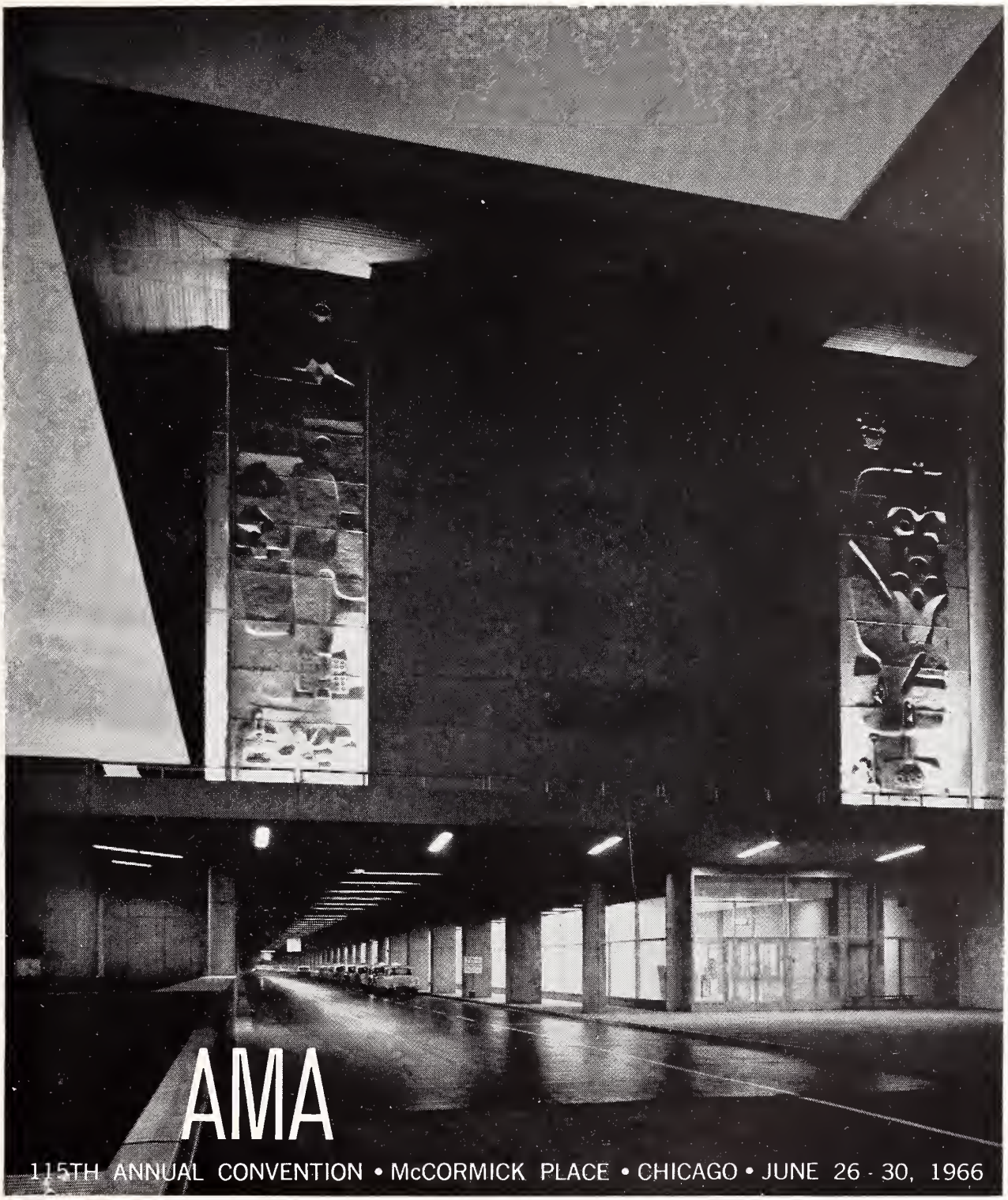
Scott County

The Woman's Auxiliary of the Medical Society of Scott County has contributed $2,425 in three years to the Scott County Mental Health Center. Mrs. Edwin A. Motto, Bettendorf, is mental health chairman for this Auxiliary which recently contributed $925. Dr. Anthony Paukovic is director of the Center, and his assistant is Dr. Vera French. They have a table, an electric typewriter and a Dictaphone which were purchased with the contributions realized from a Doctor-to-Doctor Christmas-card project.

Please be sure to watch the coming issues for the history of the Health Education Loan Fund. We shall also be printing the histories of our organized counties this summer, and hope that if we don't already have yours, you will mail it immediately.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310
President-Elect—Mrs. M. E. Olsen, Minden 51553
Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501
Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312
Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228
Co-Editor—Mrs. R. R. Carlson, 826 Sherman Drive, Ankeny 50021



CXV 1966

Chicago, the convention capital of the world, hosts the world's largest medical convention. Each year the AMA Annual Convention presents a wider and greater range of medical subjects. This year's convention will be held in magnificent McCormick Place. Air-conditioned, it offers almost unparalleled facilities. View and participate in the following: • Six general scientific meetings • 23 medical specialty programs • 800 scientific and industrial exhibits • Lectures, panel discussions, motion pictures and color television. Plan to attend—continue your post-graduate education.

See JAMA May 9 for complete scientific program—forms for advance registration and hotel accommodations.

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Personals

About 600 people attended a reception, in Allison on April 7, for **Dr. F. F. McKean** marking the twenty-fifth anniversary of his starting medical practice there. **Dr. Fred Rolfs,** of Aplington, gave a short talk, and about a dozen other physicians from surrounding towns were present. The Allison Commercial Club sponsored the party.

The principal speakers at a cardiac conference in Mason City on April 20, sponsored by the Tenth District of the Iowa Nurses Association and the North Central Division of the Iowa Heart Association, were **Dr. John Gustafson,** of Des Moines, **Dr. Dorothy Ehmke,** an assistant professor of pediatrics at the U. of I. College of Medicine, Iowa City, and **Dr. L. J. Kirkham,** of Mason City.

The OSKALOOSA HERALD for April 19 contained a feature story identifying **Dr. John E. Traister,** of Eddyville, as the state's oldest trapshooter. The retired physician, whose eighty-ninth birthday will occur in June, spent much of his spare time at trapshooting while he was in practice, and afterward, with his wife **Ethel,** who died last February, he operated a gun club at the vacated Ottumwa Naval Base. He is a Life Member of the Iowa Medical Society.

Dr. Robert J. Joynt, who has been teaching neurology at the U. of I. College of Medicine since 1957, has resigned, effective July 1, to become chairman of a new department of neurology at the University of Rochester School of Medicine and Dentistry, in Rochester, New York. Dr. Joynt is a native of Le Mars and a 1949 graduate of Westmar College. He took his M.D. degree in 1952 and a Ph.D. degree in anatomy in 1963 at the University of Iowa. In Iowa City he has held the rank of associate professor.

The Polk County Medical Society heard a discussion of the abortion problem at its April 20 meeting in Des Moines. According to a report in the next day's DES MOINES REGISTER, **Dr. Robert M. Kretzschmar,** an associate professor of obstetrics and gynecology at the U. of I. College of Medicine, said in response to a question that the number of illegal abortions performed in Iowa might be as high as 20,000 per year, if the pattern of some urban studies applies in this state. He added, however, that he doesn't think the problem is that extensive in Iowa. He said it has been estimated that 1,000,000 illegal abortions a year are performed in the U. S., and that 5,000 to 10,000 women die as a result of those illegal operations each year.

Dr. John M. Rhodes, of Pocahontas, was quoted as saying that patients and organizations may

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ask for liberalized abortion laws, but physicians must resist, just as a parent must resist unwise requests from his children. "I see no reason why we can't say 'no' to our patients when what they want is wrong," he declared.

Expansion and remodeling of the four-office clinic of **Drs. Robert Collison, Sidney Smith** and **N. L. Saxton,** at Oskaloosa, will be completed this spring. There are three rooms in each unit, and a 50-car parking lot.

Dr. Herbert Nelson, an assistant professor of psychiatry at the U. of I., has been appointed assistant director of the State Psychiatric Hospital, in Iowa City. **Dr. Paul E. Huston** is the director, and the institution hasn't previously had an assistant director. Dr. Nelson was project director of the Comprehensive Mental Health Planning Unit for Iowa, which recently made its report.

Dr. Carroll E. Sinnard is to join **Drs. James Coffey** and **Francis Conway,** in Emmetsburg, on July 1. Dr. Sinnard took his undergraduate training at Creighton University, and his M.D. degree at the University of Nebraska Medical School. At present, he is completing his internship at Lincoln General Hospital, Lincoln. A native of Knoxville, Iowa, he is married and has four children.

Clergymen from Bloomfield and Ottumwa participated in a discussion of the psychological impact of cancer and its treatment, on April 15, with **Dr. Addison W. Brown,** a Des Moines obstetrician and gynecologist, and **Dr. Richard Hastings,** an Ottumwa radiologist, at a public meeting held in the Bloomfield Christian Church. Dr. Hastings is president of the Iowa Division of the American Cancer Society, and Dr. Brown heads the organization's education committee.

Dr. Hans Zellweger, a professor of pediatrics at the U. of I. College of Medicine, was one of the speakers at a conference in Cedar Rapids, on April 23 and 24, sponsored by the Muscular Dystrophy Association of America. Delegates from 15 chapters of the Association were invited.

Dr. Robert E. Hodges, a professor of internal medicine at the U. of I., has been installed as president of the American Society for Clinical Nutrition. The organization was founded in 1960, and Dr. Hodges was its secretary-treasurer for its first three years. Its objectives are to foster high stan-

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Contraindications: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

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Meprobamate: Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

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Meprobamate: Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.

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dards for research in human nutrition, to promote undergraduate and graduate education in the field, and to provide forums and a journal to disseminate the discoveries in it.

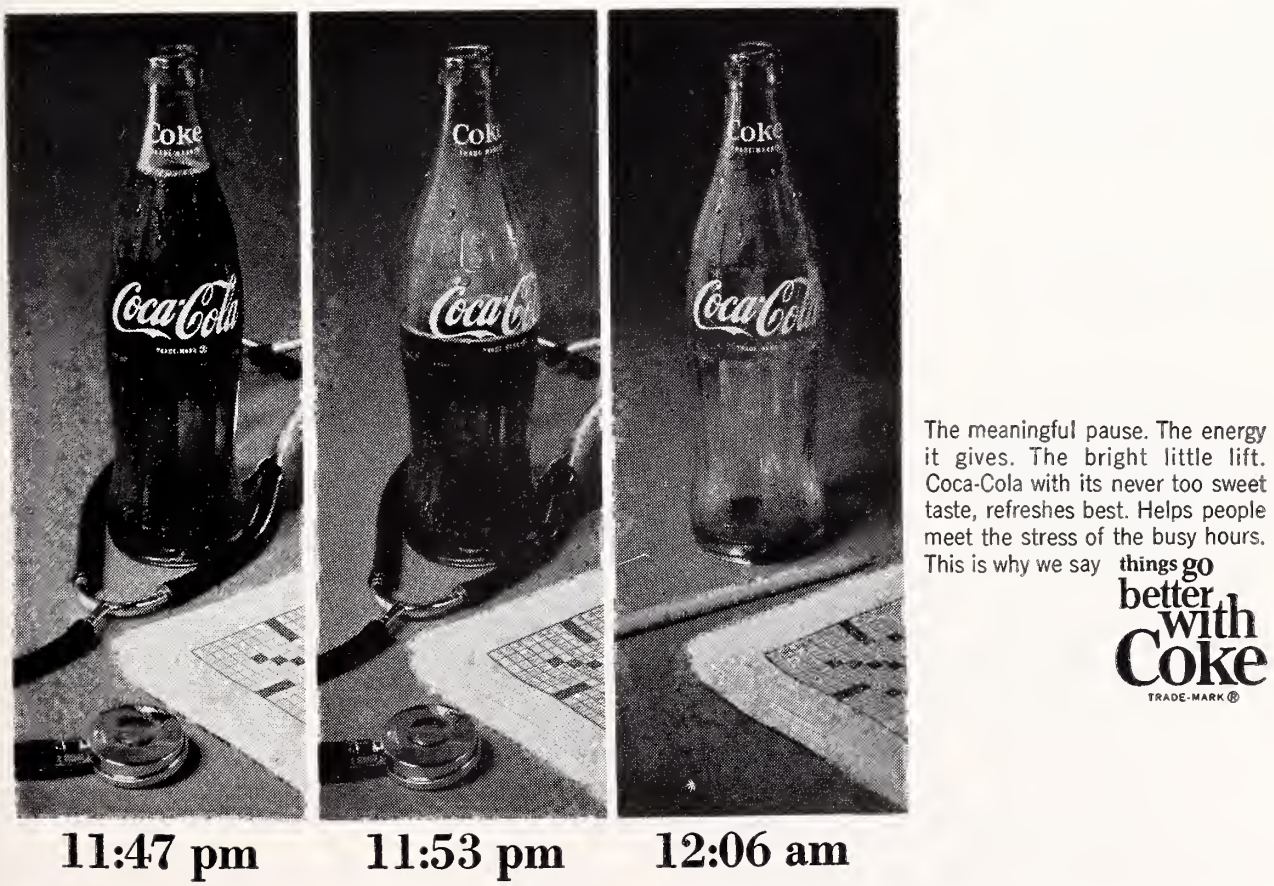
Dr. Carl S. Vestling, professor and head of biochemistry at the U. of I., has been elected chairman of the Iowa Section of the Society for Experimental Biology and Medicine. Others elected to or continuing in the Division's offices are **Dr. Francois M. Abboud,** associate professor of internal medicine, secretary-treasurer; and **Dr. Sidney E. Ziffren,** professor of surgery, **Dr. E. E. Roderuck,** of the Department of Food and Nutrition, Iowa State University, Ames, and **Dr. J. Paul Long,** professor of pharmacology, all members of the local membership committee. The councilors are **Dr. Byron A. Schottelius,** an associate professor of physiology and biophysics at the U. of I., and **Dr. W. B. Buck,** of the ISU College of Veterinary Medicine. National membership committeeman is **Dr. Albert P. McKee,** a professor of microbiology.

Six student nurses in Black Hawk County received nursing scholarships, on April 19, from a trust fund established by the Waterloo Junior Chamber of Commerce, the Fourth District of the Iowa Nurses Association, the Black Hawk County Medical Society and the Black Hawk County Pharmaceutical Association. Satisfactory completion of at least a half-year of nursing education is a prerequisite, and applicants are accepted on the bases of need and scholastic ability. One of the young ladies is a practical-nursing student.

At the meeting of the Iowa Clinical Surgical Society, in Ft. Dodge on April 16, **Dr. Glenn C. Blome** was elected president of the group, and **Dr. Loran E. Coppoc** was named vice-president. Both of them practice in Ottumwa. The Society limits its membership to 60, and meets twice a year, once in Iowa City and once elsewhere.

Dr. Arthur P. Long, the state commissioner of health, presented numerous interesting statistics in a speech to the Iowa Hospital Association, in Des Moines on April 13. Only in half of the Iowa counties has a health officer ever been appointed, and only in half a dozen counties has there ever been a sanitation officer, he declared.

He estimated that it would cost $27 million to modernize and replace obsolete hospital equipment in Iowa. "It is estimated that there now are about 13,600 hospital beds in the state. Of those,



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5,300 should be modernized, and between 300 and 400 should be replaced," he said. In addition, he estimated that it would cost $20 million to meet requirements for new or improved mental-illness facilities, and that another $60 million could be spent for extended-treatment facilities and related activities. "Thus it has been quite realistically estimated that total costs for planning and construction of hospital and extended-treatment facilities is about $138 million."

Dr. Eugene E. Lister has been elected president of the Dallas Center Rotary Club.

On March 18, burglars entered the residence of **Dr. Ross King,** in a wooded area on the Mississippi River near Clinton, and stole two pairs of binoculars and a portable television set. Police caught the thieves and recovered the goods. Then, during the third week in April, Dr. King reported that his home had been entered again, and that the same television set, a pair of binoculars and two telescopes were missing.

Dr. Richard Bealka, director of the child psychiatric services at the Independence Mental Health Institute, was one of the two principal speakers at the 15th annual Elementary Leaders Conference, on April 7 and 8, at the State College of Iowa, Cedar Falls. The theme of the program was "Pressures on Children that Build or Break," and the audience consisted of elementary-school principals and teachers, and guidance counselors.

The new office building for **Drs. C. R. Sokol** and **Ray G. Robinson,** at State Center, was ready for occupancy early in May.

Dr. Leslie Bernstein, an associate professor of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, addressed a meeting of the American Academy of Facial, Plastic and Reconstructive Surgery in San Juan, Puerto Rico, in mid-April.

Dr. C. Duane Burgess, a third-year psychiatric resident at the Mental Health Institute in Cherokee, addressed a PTA group in Primghar early in April. His topic was "Discipline; What It Is and What It Isn't."

Three U. of I. physicians have been reappointed to AMA committees. **Dr. W. D. Paul,** professor of physical medicine and rehabilitation, was renamed to the Committee on the Medical Aspects of Sports. **Dr. Robert G. Carney,** head of dermatology, was reappointed to the Committee on Cutaneous Health and Cosmetics. **Dr. Lauren A. Woods,** head of pharmacology, was reappointed to the Council on Drugs.

The State Health Department sent a field representative to Burlington early in April to conduct a telephone survey of about 250 (10 per cent) of the youngsters who had been inoculated with the measles vaccine that the Department is making available. **Dr. John C. McKitterick,** a Burlington pediatrician, was quoted in the local newspaper as saying, "Children who received the vaccine are having a bigger reaction than was anticipated, and much more than I have ever seen from shots given in private practice."

At the annual meeting of the Iowa Chapter of the Arthritis Foundation, in Des Moines on May 11, **Dr. W. D. Paul,** of the U. of I. College of Medicine, cited findings in a British survey as evidence of the likelihood that the fluoridation of drinking water reduces the incidence of osteoarthritis in elderly people, just as it reduces the incidence of caries in children's teeth.

The CRESTON NEWS-ADVERTISER for April 2 contained a quarter-page feature story about **Dr. A. Fred Watts,** who took his M.D. degree in Iowa City exactly 50 years ago. He began practice at Creston in 1920, and except for the years 1944-1949, when he was in Seattle, he has practiced there ever since. He is now 81 years of age.

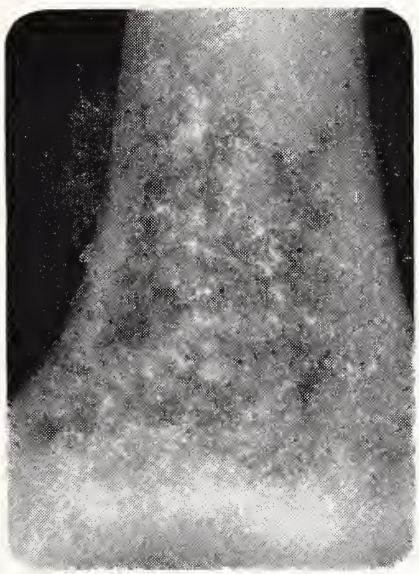
Dr. A. E. Mayner, of Winthrop, is one of the candidates for election to the vocational-technical school board in the Waterloo area. He began the practice of medicine there in 1965, and subsequently announced that he would practice part time at Independence, too.

Drs. C. R. Aschoff and **J. H. Lohnes,** of Cedar Rapids, addressed members of the Linn County Medical Assistants, April 13.

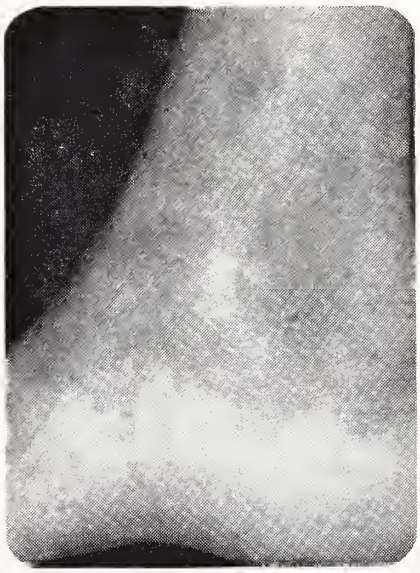
The AMA Board of Trustees has reappointed **Dr. Samuel P. Leinbach,** of Belmond, president of the Iowa Medical Society, to the AMA Rural Health Committee.

At the annual meeting of the Wapello County Medical Society, in Ottumwa on April 5, **Dr. L. E.**

eczema: scourge of childhood



R. R., Age 11—Before treatment—atopic eczema of long standing



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Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

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Principal cautions and side effects: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

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Coppoc succeeded **Dr. H. L. Wormhoudt** as president; **Dr. A. T. Austin** was chosen president-elect; **Dr. R. P. Meyer** was reelected secretary-treasurer; and **Dr. Paul W. Scott** was chosen as a new member of the board of censors.

Dr. Henry J. Caes, pathologist at St. Joseph Mercy Hospital, Sioux City, has been named an associate clinical professor of pathology at the Creighton University School of Medicine, Omaha. He has been an assistant professor on the Creighton faculty since 1960.

At a meeting held in Davenport on April 28, **Dr. John Moberly,** of Dubuque, was elected president of the Mississippi Valley Division of the Iowa Heart Association, and **Dr. George Ellison,** of Clinton, was elected vice-president.

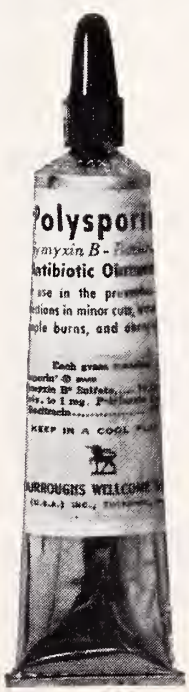
Dr. Ian M. Smith, a professor of internal medicine at the U. of I. College of Medicine, has received a $2,500 research gift from Wyeth Laboratories, Philadelphia. A representative of the firm, who made the presentation at a luncheon for Dr. Smith and some of his friends, said that it was given in recognition of Dr. Smith's research accomplishments, and that he can use it in any way he wishes to improve or speed research under his direction. He has been especially prominent in the search for antibiotics with which to combat staphylococcal infections.

A Fort Dodge physician and his wife are now directors, respectively, of the YMCA and YWCA organizations there. They are **Dr. and Mrs. J. G. McCarroll.** It is believed that the clubs have never before had interlocking directorates.

Dr. Glenn I. Kimball, who has served for several years as medical consultant to Blue Cross and Blue Shield in Des Moines, has been appointed medical director of the Lutheran Mutual Life Insurance Company, in Waverly.

Dr. Donald Faber, a surgeon, opened a practice in Le Mars on May 1. His boyhood home was at Hull, Iowa, he took his M.D. degree at the University of Iowa College of Medicine, and he served

in treating topical infections, no need to sensitize the patient



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his residency at Iowa Methodist Hospital, Des Moines. Most recently, he has been practicing in Sioux Falls.

Contracts have been let for a 32-bed addition to Loring Hospital, in Sac City. It will double the capacity of the institution.

Dr. Roger Westerlund, of the McFarland Clinic, Ames, spoke at a meeting sponsored by a nursery-school PTA, in Ames on April 18, on artificial respiration. He presented a short course that he has designed to inform laymen about how to care for someone who is unconscious or appears to be dead.

Dr. Harry W. Fischer, a professor of radiology at the U. of I. College of Medicine, has resigned to take a position at the University of Michigan; **Dr. Charles R. Leeson,** a professor of anatomy, is to go to the University of Missouri Medical School; **Dr. George M. Owen,** an assistant professor of pediatrics, has accepted an appointment at Ohio State University; **Dr. Donald A. Shumrick,** an assistant professor of otolaryngology and maxillo-facial surgery, will go to the University of Cincinnati; **Barrie D. Smith, Ph.D.,** an assistant professor of anatomy, will join the faculty at the University of Missouri; and **Dr. John R. Thornbury,** an assistant professor of radiology, is going to the University of Washington, Seattle.

Dr. A. J. Gantz, of Greenfield, was chosen as a member of the Area 14 junior college and vocational-technical board of education in an election held late in April.

Dr. Thomas S. Hutcheson, of Denison, and **Dr. Donald E. Wolters,** of Estherville, have become members of the American Academy of General Practice.

At the annual meeting of the Iowa TB and Health Association, in Des Moines on May 5, **Dr. Walter M. Kirkendall,** a professor of internal medicine and head of the cardiovascular unit at the U. of I. College of Medicine, was presented the Walter L. Bierring Award for outstanding work in the improvement of tuberculosis control, and the Marshalltown Assistance League was given the Frances Brophy Award for outstanding volunteer service.

Dr. E. O. Schlichtemeier, of Spencer, became president of the Northwest Division of the Iowa

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Heart Association at a meeting held in Sibley on April 22, and **Dr. F. B. O'Leary,** of Sibley, was chosen as president-elect.

Dr. R. J. Mattice announced on April 26 that he has accepted a position on the staff of the student health service at the University of Missouri, in Columbia, effective August 1. He has practiced for 18 years in Sioux Rapids.

Drs. C. R. Rominger, L. B. Bray and **B. R. Withers,** of Waukon, have announced that **Dr. John Lanning,** an internist, will join them on about October 1. Dr. Lanning's boyhood home was in Tulsa. He took his M.D. at the University of Oklahoma in 1960, interned in Bakersfield, California, was in Navy service from 1961 to 1964, and will finish his residency at the Mayo Clinic in September. **Mrs. Lanning** attended high school in Elkader, and later attended Cornell College, in Mt. Vernon, Iowa. The Lannings have four sons.

Addressing the board of directors of the Lee County Mental Health Center, who came to see him on April 13, **Dr. W. B. Brown,** superintendent of the Mental Health Institute at Mt. Pleasant, reminisced that 20 years ago his institution had about 1,550 patients. Today there are only 360. Admissions, however, still average about 1,000 per year, but the typical patient's stay is about 74 days. At the onset of World War II, he said, there were only about five psychiatrists in private practice in Iowa, but now there are more than 50. The community mental health centers, he said, are playing an important role in preventing mental illness through early detection and treatment of emotional problems. He paid tribute to the general practitioners too, saying that they are doing a great deal of good work in the preventive field, with the result that the mental health institutes receive fewer acute cases than formerly.

Dr. J. D. Teigland, of Des Moines, addressed the Jasper County Registered Nurses Association, on April 25, in Newton, on "Allergies—Character, Causes and Treatment."

At the April 25 meeting of the Northwest Iowa Peace Officers Association, in Fort Dodge, **Dr. Dale Harding,** of Eagle Grove, explained the duties of a county medical examiner and showed slides illustrating some of the investigations in which he has participated. About 50 officers were present.

Dr. William G. McAllister, of Manly, was elected president of the North Iowa Area Community

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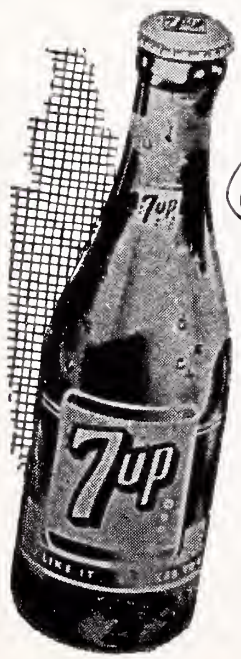

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College Board of Directors, on May 3, at an organizational meeting held in Mason City.

Dr. C. C. Griffin announced on April 5 that he will resume practicing medicine at Dyersville, presumably sometime next fall. Civic leaders in the Dubuque County town of 2,500 people have been deeply troubled since he and another physician departed, last year, leaving the community with just one doctor of medicine. Dr. Griffin's contract with the student health service at the University of North Carolina extends until sometime this summer.

Dr. and Mrs. C. D. Gibson, of Sac City, returned on March 29 from a 12-day Caribbean cruise sponsored by Duke University and the American Academy of Orthopedic Surgeons. Dr. Gibson attended several medical lectures on shipboard.

At an election on April 11, **Dr. Charles Wilson,** of Manson, was one of four Calhoun County candidates for the board of the Area Community College-Vocational Technical School District which includes Greene, Hamilton, Humboldt, Pocahontas, Sac, Webster, and Wright Counties, in addition to Calhoun County. A week earlier, Dr. Wilson had been chosen as president of the board of the North Central Iowa Mental Health Center.

Drs. E. A. Motto, Robert W. McConnell, W. D. Edgerton and **Kenneth H. McKay,** of Davenport, discussed cancer at a meeting of the Business and Professional Women's Club there, on April 12.

Dr. J. T. Worrell participated in a symposium on "Education for Marriage" at a meeting of Future Homemakers of America, in Keosauqua on March 29. The other panelists were a clergyman, a social worker, a home demonstration agent of the Extension Service, a high school teacher and a high school student.

At the April 30 meeting of the Iowa-Midwest Neurosurgical Society, held at the Des Moines Club, in Des Moines, the speakers were **Dr. Olan R. Hyndman,** a clinical professor of surgery, **Dr. Herbert B. Locksley,** and associate professor of neurosurgery, **Dr. Michael Bonfiglio,** a professor of orthopedic surgery, and **Dr. Robert Morrison,** an assistant professor of radiation research. Two of the topics were surgery of recurrent disc syndrome and brain-scanning technics. All of the speakers were from the U. of I. College of Medicine.

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Dr. R. N. Conmey, who practiced for 60 years in Sergeant Bluff, until his retirement in February, is moving to North Hollywood, California. He has undergone three operations since then, the most recent of them on April 29. He is 83 years of age.

Drs. Robert Rowley, Robert B. Allen and **John Stockdale** refused a check tendered as partial payment for the care of one of the victims of the Armory explosion and fire at Keokuk last Thanksgiving eve, and instead the money was divided between Graham and St. Joseph Hospitals there. The three physicians practice in Burlington.

Dr. John McGee, of Fort Madison, participated in a two-day program on family and marriage counseling, in Chicago on April 30 and May 1, sponsored by the American College of Obstetricians and Gynecologists, of which he is a member.

Charles T. Hall, Ph.D., has been appointed chief of the Laboratory Consultation and Development Division of the State Hygienic Laboratory, at the U. of I. Besides serving as liaison with laboratories throughout the state, he will conduct training programs for laboratory personnel. He has been a supervisory research microbiologist at the U.S.P.H.S. Communicable Disease Center in Atlanta for five years.

A series of two meetings, one for physicians and the other for the public, was held in Manchester on April 28 under the sponsorship of the Delaware County Medical Society. **Keith Long, Ph.D.,** of the Institute of Agricultural Medicine at the U. of I., **Oscar Beasley, M.D.,** of Iowa City, and **Harold Gunderson, Ph.D.,** extension entomologist at I.S.U., discussed problems posed by agricultural chemicals. The Institute of Agricultural Medicine is anxious to have other medical societies provide it similar opportunities to discuss those problems with physicians and with laymen.

Dr. John Hege, of Anamosa, addressed the Buchanan County Association for Mental Health on "My Patient, the Offender," at the Hotel Pinicon, Independence, on April 28. Dr. Hege, a psychiatrist, has been chosen to head the new security hospital that is to be built at Oakdale.

At the Johnson County Medical Society's meeting on May 4, in Iowa City, **Dr. William E. Connor,** an associate professor of internal medicine at the U. of I., discussed "Fat in the Diet, in the Blood and in the Arteries."

Dr. C. R. Harken, of Osceola, was hospitalized in Des Moines during mid-April.

Dr. F. Douglas Lawson, a Fort Dodge radiologist, was elected president of the Webster County TB and Health Association on April 19. **Dr. Charles Baker,** a pediatrician, was named first vice-president. Other Fort Dodge physicians who have various responsibilities in the organization are **Drs. R. E. Drown, A. P. Echternacht, Don G. Bock, John F. Kelly,** and **Don E. Tyler.**

Dr. Craig Champion has returned to Osage

Six of the 14 physicians elected to IMS Life Membership this year were present at the annual banquet to receive their framed letters and Fifty-Year Club pins. They were (from left to right) Harry R. Jenkinson, M.D., Iowa City; Bernard L. Trey, M.D., Marshalltown; Thomas A. Burke, M.D., Mason City; Frank W. Fordyce, Des Moines; Harold L. Brereton, M.D., Emmetsburg; and Harry F. Kiesling, M.D., Lehigh. The others were Floyd H. Fillenwarth, M.D., Charles City; Raymond S. Grossman, M.D., Marshalltown; James E. Dyson, M.D., Phoenix, Arizona; Verl A. Ruth, M.D., Des Moines; Ralph R. Simmons, M.D., Bloomfield, Connecticut; Elmer G. Senty, M.D., Davenport; John G. Goggin, M.D., Ossian; and T. Roy Gittins, M.D., Sioux City. Life memberships are awarded on the basis of 50 years of practice and 30 years of IMS membership.

after his Navy service. He is a member of the staff of the Osage Clinic.

At a conference and workshop for public health workers in Dubuque on June 1-3, the methods of determining the origin, frequency and distribution of communicable diseases will be demonstrated. At the dinner meeting on June 1, which opens the program, **Dr. Kenneth K. Hazlet**, of Dubuque, will be the moderator, and the panelists will be **John A. Rowe, Ph.D.**, of Kansas City, communicable-diseases program director for Region VI of the U.S.P.H.S.; **Mr. Joseph N. Wallace,** of Lincoln, a communicable-disease program coordinator; and **Dr. James F. Speers**, of Des Moines, director of regional and community health services in the Iowa State Department of Health. On June 2 and 3, Mr. Wallace will conduct exercises in block surveys and in compiling and interpreting results.

Dr. Thomas E. Johnson, a St. Paul radiologist, addressed the Woodbury County Medical Society on "The Multiple Use of Angiography in Private Practice," on May 19, at a meeting held in the Sioux City Country Club.

Deaths

Dr. Russell A. Knight, 61, of Rockford, died on April 28 at his home, apparently from a heart attack. He was found in his garden, where he had been working. He had practiced in the community for 33 years.

Dr. C. H. Johnson, 81, who practiced for many years at Cherokee, died at a hospital there, on April 26, after a seven-week illness.

Dr. George H. Clark, 67, an Oskaloosa surgeon, died at his home there on April 21. He retired in 1958 because of poor health. A life-long resident of Oskaloosa, he took his M.D. degree at Northwestern University in 1924, and served in the Navy during World War II. He was a fellow of the American College of Surgeons.

Dr. Walter M. Skallerup, 76, who practiced at Walker for 49 years, died on April 19 at his home there.

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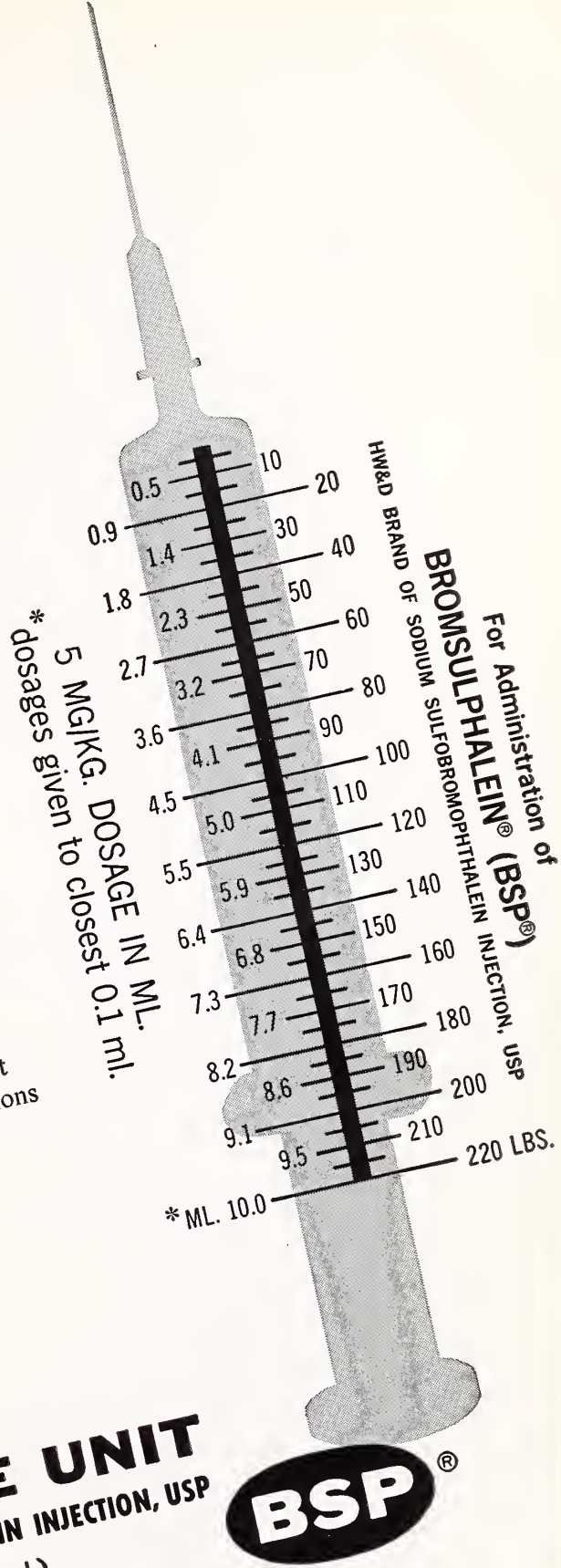

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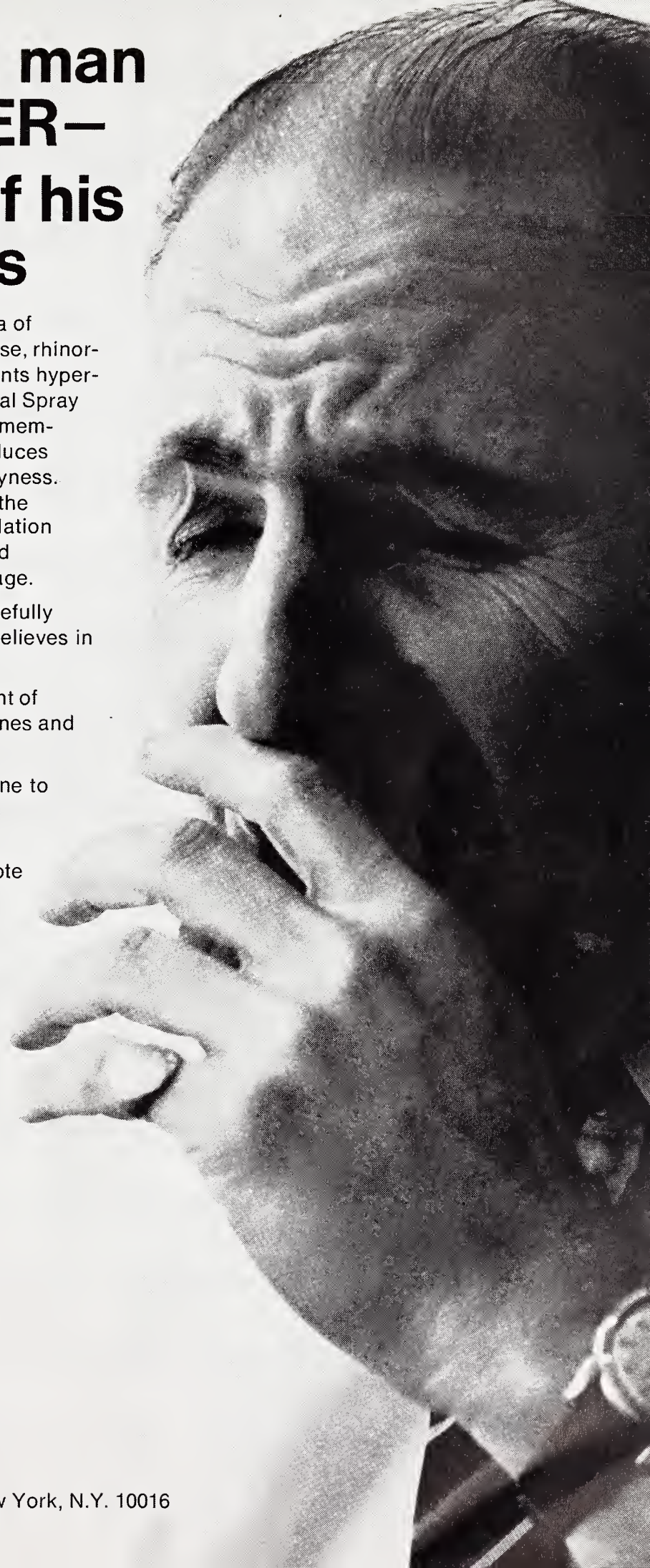

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The Month in Washington

Washington, D. C.—Administration officials say that the doctor-patient relationship should not be impaired under Medicare. Dr. Philip R. Lee, assistant secretary of Health, Education and Welfare for health and scientific affairs, said in an interview that in drafting Medicare regulations, federal officials had been doing their utmost to insure that the traditional doctor-patient relationship is preserved.

"The guidelines for the Medicare program were developed with the close cooperation of so many physicians and other people in the health care field that this will provide the best assurance for the physicians, for the government, for Congress and for the public that the implementation of Medicare will not alter the fundamental and vital personal relationship between the doctor and the patient," Lee said. "This was clearly the intent of Congress," he added.

Lee termed the cooperation of physicians and hospital officials in developing Medicare guidelines as "extraordinary." He said he personally expects the doctor-patient relationship to improve under Medicare because removal of the financing problem, to a large extent, will give a physician more leeway in ordering laboratory tests and sending a patient to a hospital.

"Our most important concern in implementing the Medicare program is education," Lee said. "The education extends to the doctor, the patient and administrators of the program." Lee's office published a brochure for patients and another for doctors explaining what the medical insurance program does and doesn't do.

The Social Security Administration said that nine out of 10 of those 65 and over had enrolled in Plan B of Medicare by the second signup deadline, midnight, May 31. The original deadline had been extended for two months in an effort to get replies from as many as possible of the 19.1 million eligible aged persons. More than 400,000 signed up during the two months, bringing the total to about 17.2 million. About one million said they didn't want Plan B coverage. Those who failed to sign up this time will not have another opportunity until Oct. 1, 1967, and they then will have to pay premiums that are at least 10 per cent higher.

President Johnson invited about 200 physicians and hospital administrators to a White House meeting on June 15 "to examine problems that may arise and to discuss cooperative arrangements so that the [Medicare] program will get off to a good start." In addition to Mr. Johnson, speakers at the meeting included HEW Secretary John W. Gardner; HEW Undersecretary Wilbur J. Cohen; Dr. Lee; Surgeon General William H. Stewart; Social Security Commissioner Robert M. Ball, and Arthur E. Hess, director of Medicare.

Social Security headquarters at Baltimore set up an around-the-clock Medicare information service to help its district offices respond to queries from beneficiaries, physicians, hospital administrators and others.

* * *

The Defense Department has slashed by almost one-third—from 2,496 to 1,713—its special draft call of physicians for the Armed Forces this summer. Under the revised doctor draft call, the Army will take 958, the Navy 405 and the Air Force 350.

The Pentagon said casualties in Southeast Asia had been fewer than expected, and that the number of volunteering physicians had exceeded estimates. In reducing the call by 783, the Defense Department pointed out it had originally issued its request to Selective Service last February. At that time it used best estimates available on the number of additional physicians who would be needed for the buildup of the Armed Forces in connection with the Viet Nam war.

* * *

The federal government will conduct a nationwide survey to determine factors that lead people, particularly older persons, to fall victim to fakes and swindles in the health field. Seven agencies of the government are joining in the study which was recommended by the Senate Subcommittee on Frauds and Misrepresentations Affecting the Elderly. The study will include various other age groups beginning with teenagers, but it will focus on the elderly.

At hearings of the Subcommittee, it was estimated that a billion dollars is wasted each year on misrepresented, unnecessary or worthless health products and services, with a large share of such spending by older persons, especially those suffering from chronic and incurable diseases. There is general agreement among the government agencies involved that this waste of money can be greatly reduced if more knowledge is available about why people become victims of medical quackery.

The Food and Drug Administration is coordinating the study. Joining with FDA in the survey project are the Administration on Aging; National Institute of Child Health and Human Development; National Institute of Mental Health; and Vocational Rehabilitation Administration—all within the Department of Health, Education, and Welfare; the Agricultural Research Service of the

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U. S. Department of Agriculture, and the Veterans Administration. A number of voluntary health agencies, the American Medical Association and the National Better Business Bureau helped in planning the study.

It will seek to determine the influence that such factors as family and educational background, folk-medicine customs, and health experiences exert upon consumer attitudes toward health products, services, and information. It will examine the extent to which such factors make some individuals susceptible to false and misleading promotions for health products and services, or resistant to sound medical and health information. Armed with such knowledge, the agencies hope to devise more effective educational and other programs to protect the public against health frauds and quackery.

* * *

HEW Secretary John W. Gardner plans to reorganize the Public Health Service to give the surgeon general more control over eight new divisions which would replace the present eight.

One of the new ones would be a National Institute of Mental Health which is now lumped under the National Institutes of Health. It would include the Fort Worth and Lexington Narcotics Hospitals and would "administer a unified program of research, manpower training, demonstrations and mental health services." Mr. Gardner said the proposed institute would "serve as the principal focus for research and control programs in alcoholism and drug addiction."

The other seven new divisions would be the National Institutes of Health, the Bureau of Health Services, the Bureau of Health Manpower, the Bureau of Disease and Injury Prevention and Control, the National Library of Medicine, the National Center for Health Statistics and the Surgeon General's Office.

Mr. Gardner also told a House Commerce Subcommittee that studies are underway to reorganize HEW into a Pentagon-type organization with a super-type secretary over three separate secretaries of health, education and welfare. But, he said, "now is not the time to act on those proposals."

Mr. Gardner's Public Health Service reorganization plan would place all functions of the Public Health Service, the surgeon general and all other agencies in the service under the secretary's control. He called the present structure of the Public Health Service "obsolete," pointing out that it had remained unchanged since 1943 when the service had a budget of $52 million compared to the present budget of $2.4 billion.

* * *

Water pollution control activities of the federal government now are under the Interior Depart-

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ment. The shift from the Department of Health, Education and Welfare became official when Congress failed to veto President Johnson's reorganization request. Mr. Johnson declared that the federal government "now is better organized to carry out concerted action against the pollution that blights America's waters."

Interior Secretary Stewart Udall promptly issued guidelines to the states for setting water quality standards designed "to make rivers as clean as possible," instead of "as clean as permissible." He outlined the Department's goal as a federal-state approach to assure a national supply of clean water necessary for health and economic growth.

Annual Report on Medical Licensure

As of Dec. 31, 1965, there were 292,088 physicians in the U. S. This number includes 239,623 licensed physicians, for a net gain of 5,286—after deaths, retirements, etc.—from the same date a year earlier. (The 52,465 unlicensed physicians, most of whom contribute to patient care, include many interns and residents, military and government-service doctors, some medical educators, administrators, and retired physicians.)

Of ten geographical regions of the U. S., all but one showed increases in newly licensed physicians of from 6 to 39 per cent during 1965. The seven-state region of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, and Utah had a 24 per cent decline.

A total of 17,812 licenses to practice medicine and surgery were issued during 1965 by 54 authorized boards in the U. S. and its territories. In addition to first licenses, these included licenses for physicians moving from one state to another. For the third successive year, California led all states in the total number of licenses issued with 2,657—34 more that the previous year. New York was second with 2,232; Pennsylvania was third with 938; Ohio, fourth with 907. Texas, Illinois, Maryland, Michigan, Virginia, and Florida followed in that order. Each issued somewhat more than 500 licenses. Iowa issued 193 first licenses.

There also were 1,250 unlimited licenses to practice medicine issued to osteopathic physicians in 1965. "The fact that there were more osteopathic licenses issued by (state) endorsement than by examinations suggests that there may have been more osteopathic physicians migrating (from one state to another) in 1965 than there were new additions to the practicing profession," the JAMA report said.

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Pregnancies Continue After Membrane Rupture

Medical annals contain virtually no reports of pregnant women who have been able to carry their babies to term when the fetal membranes rupture early in pregnancy. Usually, in such cases, labor occurs within 24 hours. However, two Missouri physicians have just reported on two women whose pregnancies continued to almost seven months and to term when they received massive doses of a progestational agent, even though the membranes ruptured between the third and fourth months of pregnancy.

"One significant fact common to both of these cases was that both women received large doses of medroxyprogesterone (Provera) prior to the rupture of the membranes," according to Drs. Robert Burstein and Samuel D. Soule, Jewish Hospital and Washington University School of Medicine, St. Louis. Reporting on the cases in MISSOURI MEDICINE,* the clinicians said it is interesting to conjecture the effect of large doses of a progestin in altering uterine response so as to inhibit contractions and subsequent emptying of the uterus.

Although each of the women received approximately 7,000 mg. of medroxyprogesterone over the course of the pregnancy, there was no evidence of abnormality in either infant. One infant died shortly after birth because of atelectasis, but autopsy disclosed completely normal histology of the endocrine and genital systems.

To their knowledge, the clinicians said that the literature reports only one case in which the membranes ruptured spontaneously earlier than the three and a half to four months in the two cases cited and in which the pregnancy continued to delivery of a viable infant.

The diagnosis of rupture is immediately questioned when pregnancy continues for such a long period after the purported rupture, Drs. Burstein and Soule commented. "In both of these cases fluid was seen in the vagina, the nitrazine test was positive, and fetal cells were found in the vaginal smears. The reliability of vaginal cytology in the diagnosis of rupture of the membrane has been reported to be in excess of 95 per cent accurate."

Commenting on one of the cases, the clinicians noted that medroxyprogesterone was administered because of inadequate Fern test and poor lutein level in the vaginal smears. Reversal of these indices following progestin therapy, as well as maintenance of the pregnancy itself, may have been coincidental, they observed. But "the repeated cytological evidence of fetal cells indicates that there never was a complete repair of a 'high rupture.' The value of vaginal cytology in the diagnosis of such complications is emphasized."

* 63:127-129, (Feb.), 1966.

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WARNINGS: Dosage of coadministered antihypertensive agents should be reduced by at least 50%. Use with caution in edema due to renal disease; advanced hepatic disease or suspected presence of electrolyte imbalance. Stenosis or ulcer of small intestine have been reported with coated potassium formulas and should be administered only when indicated. Until further clinical experience is obtained, the use of the drug in pregnant patients should be carefully weighed against possible hazards to the fetus.

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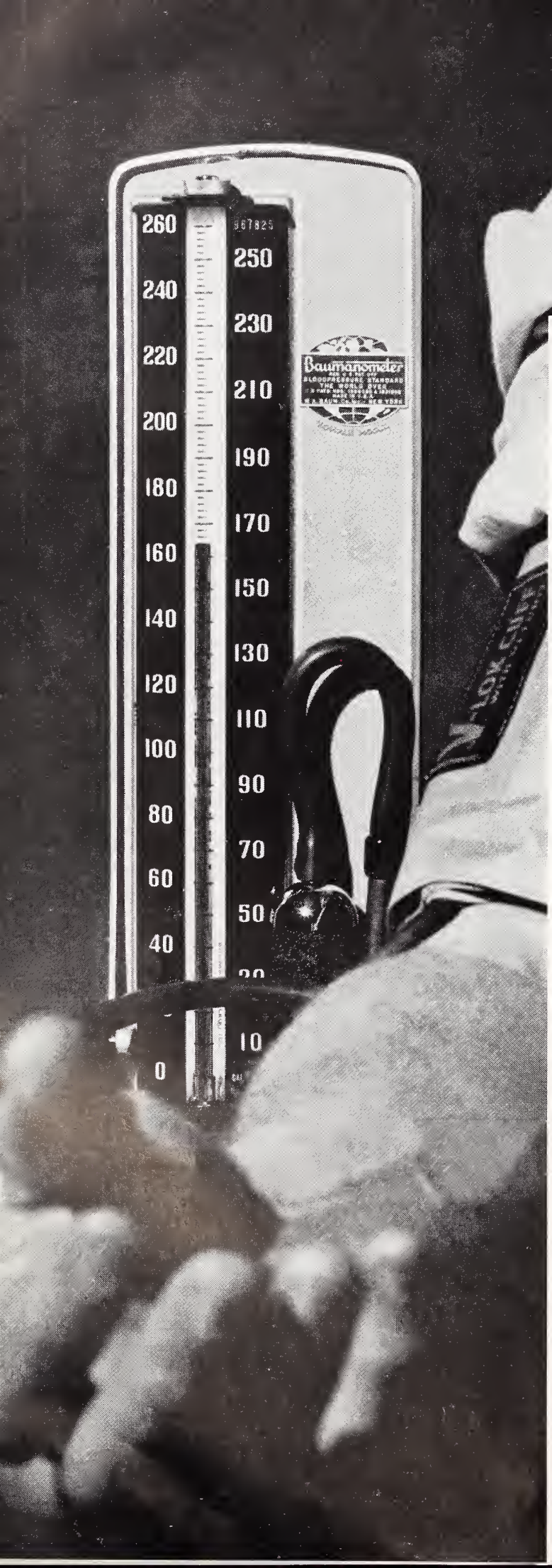

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References: 1. Telfeyan, S. A.: Clin. Med. *70*:1668, 1963. 2. Shepard, H. L.: J. Am. Geriatrics Soc. *11*:363, 1963. 3. Cummings, D. E.; Goodman, R. M., and Steigmann, F.: J. Am. Geriatrics Soc. *12*:161, 1964. 4. Castleman, B., ed.: New England J. Med. *268*:1462, 1963.

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"Physical Measures" and a Useful New Drug for Ankylosing Spondylitis

Crippling spinal deformity due to ankylosing spondylitis can easily be prevented by simple "physical measures," according to an article in the April, 1956, BULLETIN ON RHEUMATIC DISEASES, a publication of the Arthritis Foundation.

As described by Dr. John J. Calabro, these "physical measures" include specific corrective exercises, postural training, physiotherapy, and in many instances the patient's favorite sport or recreation. Prior to a physician's allowing the sport, kinesiologic analysis is performed to determine its appropriateness. Analysis has shown, Dr. Calabro reports, that archery, swimming and bait-casting are therapeutically useful, but that bowling and golfing are not.

Dr. Calabro is an associate professor of medicine at the New Jersey College of Medicine and Dentistry, Jersey City. Spinal deformity in ankylosing spondylitis arises chiefly from the bent-over or flexed position that patients assume in an attempt to ease pain and paraspinal muscle spasm, he explains. Drugs are essential for the control of the symptoms of active disease, since they relieve pain, spasm and to some extent inflammation, he continues. This permits early activity and exercise. However, exercise is fundamental to the prevention of deformity, reduction of stiffness, and maintenance of correct posture and mobility of joints, as well as prevention of loss of range of motion in specific affected peripheral or weight-bearing joints.

The correct emphases in therapeutic exercise consequently must be equal ones on correct posture and on strengthening muscle groups that oppose the direction of potential deformity. When one prescribes an individual program of physical exercise, one must consider the patient's age, strength, extent of disease and ability to cooperate. In any case, complete bed rest must be avoided. A patient should be encouraged to exercise every day, even though fatigue and fever may be present.

The article by Dr. Calabro and his associate, Dr. Rustom E. Mody, details current concepts and advances in the management of ankylosing spondylitis, a disease often regarded as rheumatoid arthritis of the spine. In summarizing his experience with 30 patients (27 men and three women) during the past eight years, Dr. Calabro also delineates the differences between these two conditions.

He reports encouraging results with the new antirheumatic drug indomethacin, after giving it to 24 patients for an average of 24 months. Significant improvement in symptoms, such as joint pain, degree and duration of morning stiffness, onset and degree of fatigue, and joint mobility, was noted. Exhaustive laboratory tests during the entire period of treatment did not reveal any changes in blood, liver or other functions during drug therapy. Dizziness, nausea, diarrhea or epigastric distress were transient side effects in seven patients during the early weeks of drug administration, but did not necessitate withdrawal of the drug.

In the absence of a known cause or cure for ankylosing spondylitis, effective management today is oriented toward preventing harmful consequences both from the disease and from its treatment. In the latter category, Dr. Calabro classes the long-term use of steroids and radiotherapy to the spine, once considered the treatment of choice. "Long-term use of steroids should be avoided, except for patients with uveitis or vasculitis," he says. "Intraarticular steroid injections may be helpful when one or two peripheral joints are involved and are retarding rehabilitation."

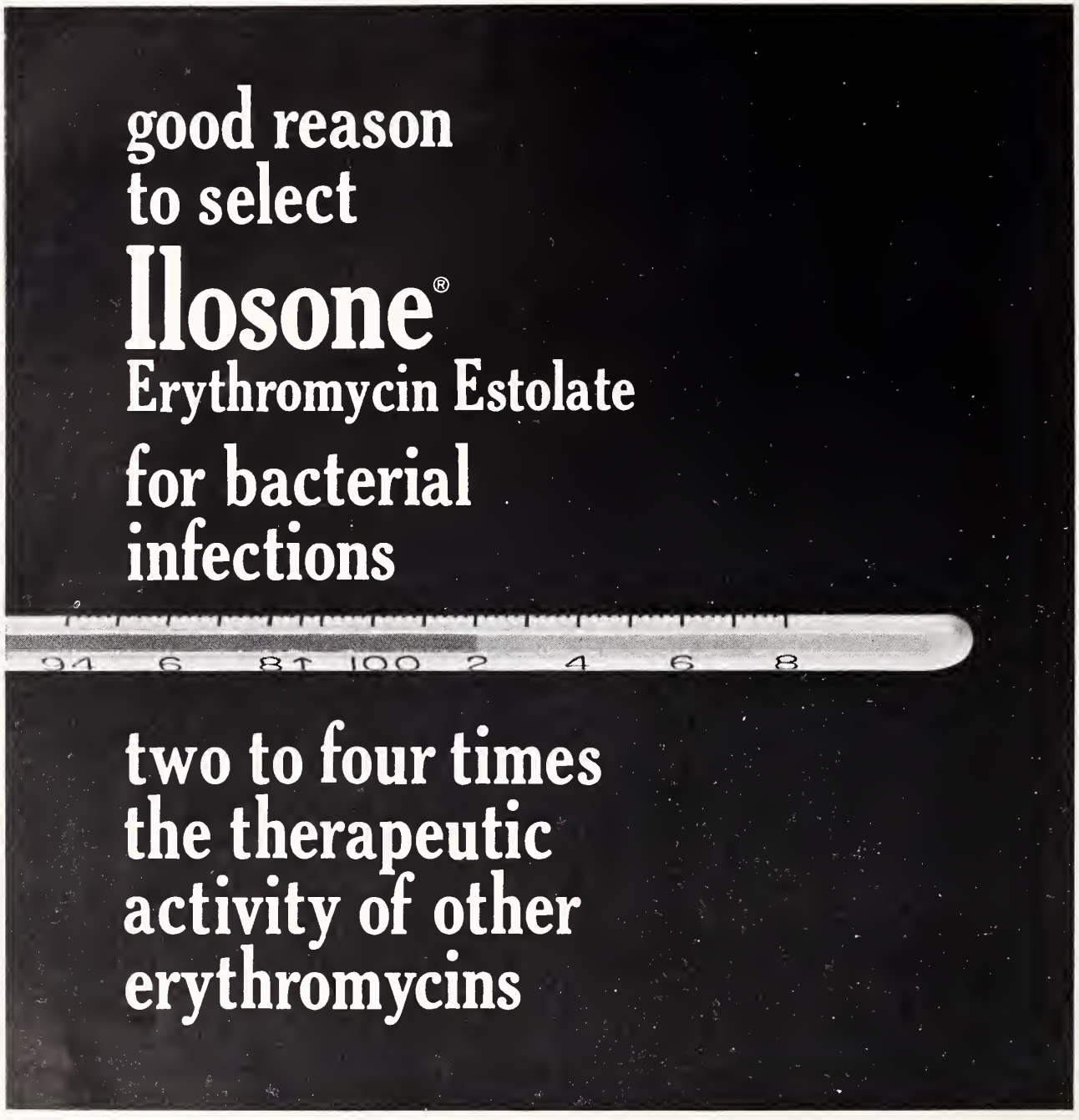
Radiotherapy must be avoided because of a high mortality risk from anemia, leukemia or other malignancies. Dr. Calabro cites a large survey in which radiotherapy caused three times more mortality than did the natural disease.

The prognosis for survival with ankylosing spondylitis is good, as is the prognosis for maintenance of functional capacity. Full employment can be achieved by the majority of patients. But it is erroneous to assume that the disease is self-limited, Dr. Calabro insists. Patients with involvement of peripheral weight-bearing joints appear to have a poorer prognosis, and consequently suffer greater functional impairment than do those with spinal disease alone.

Many aspects of ankylosing spondylitis remain to be elucidated: Why does the disease affect mostly young men? Why is it associated with other forms of arthritis or various intestinal diseases? Why do sequelae such as iridocyclitis, carditis or aortitis occur? These mysteries in the natural history of the disease make early recognition of it particularly important. In Dr. Calabro's group of 30 patients, a time lag of 7½ years occurred, on the average, between the onset of symptoms and correct diagnosis.

Recruiting Film for Use in High Schools

A new motion picture designed to help alleviate the critical doctor shortage is in production for the American Academy of General Practice. "Someone You Can Trust—Someone You Can Be," a 28-minute color film, will encourage high school students to consider a career as a medical doctor. The film is being produced by Smith Kline & French Laboratories, the Philadelphia pharmaceutical firm.



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SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

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President's Address

F. G. OBER, M.D.
Burlington

TODAY I DO NOT CHOOSE to talk with you about the failures or accomplishments of either organized medicine or the members of the medical fraternity. I think it more appropriate for us to consider together the future of medicine in Iowa.

What happens to our profession in the next 10, 20 or 50 years depends directly upon the interest that each individual physician takes in the activities of organized medicine at the county, state and national levels, as well as upon the amount of time and money he is willing to invest to carry out important programs and projects.

As president of the Iowa Medical Society during the past year, I have welcomed my opportunity to serve the profession of medicine and my medical colleagues. The scope of medical society responsibility, activity and influence is almost beyond comprehension. It is not until one becomes involved in the work of organized medicine that its true accomplishments, as well as the benefits it provides to the profession and to the public, become readily apparent. For the next several minutes, I should like to share with you a few personal observations that have crystallized in my mind during the past year.

THE BEST OF THE OLD AND THE BEST OF THE NEW

For years, we have tried to improve our "public image," and as a result, perhaps, we have conceded to others some of our professional rights and obligations. I believe the medical profession must assert itself strongly as the authority and leader in all matters relating to health. For example, we must promote and participate in appropriate area-wide health facilities planning projects at all levels; we must assume responsibility for the formation and functioning of hospital utilization committees; and we must consider and develop new approaches to medical education, so that the training of physicians can be accelerated to meet the demands of the population.

As physicians, we cannot keep our heads in the sand and ignore the socio-economic changes that have taken place in our country over the past 20 years—changes that have already affected the practice of medicine and which could, in the future, alter our established traditions and concepts even more drastically. We must be astute enough to recognize the obvious—and the not so obvious—threats to our profession. And we must be courageous and firm in our efforts to thwart those threats.

I do not wish to imply that we should be forever committed to the *status quo*. Neither should we oppose measures which would truly upgrade our methods of providing care to our patients. However, we should be able to recognize the difference between progress and expediency.

WE MUST PROVIDE LEADERSHIP

Major social changes affecting medicine began in the late 1940's. That period was the beginning of an increase in specialization, a decline in the number of general practitioners, a move toward group practice, and an involvement of third parties in the financing of health care services. Since that time, we have traveled a long and unpleasant road to the Medicare Law. But, as unpalatable as the Medicare Law is to the medical profession—and, I might add, to many, many others—its effects may be minimal compared to those that we can expect from Public Law 89-239—the Heart Disease, Cancer, and Stroke Amendments of 1965.

If implementation of PL 89-239 is not kept under careful surveillance, and if the medical profession fails to provide necessary leadership, the provisions of that legislation could bring about a complete revolution in the practice of medicine as we know it today. In essence, PL 89-239 provides for federal grants to encourage and assist in the establishment of regional cooperative arrangement among medical schools, research institutions, and hospitals for training and research, as well as for related demonstrations of patient care in the fields of heart disease, cancer, stroke and related diseases.

As of this date, the development of a regional program in Iowa is in the planning stage. Dr. Robert Hardin, dean of the University of Iowa College of Medicine, along with representatives from the IMS, the Department of Health, and other interested organizations, comprise a committee which has approved the implementation of a survey of the Iowa region to determine what services and facilities might be needed to carry out the intent of the law. The College of Medicine will apply for

a planning grant to implement this survey project.

We are indeed fortunate that Dr. Hardin is in the "command" position for this program, and I should like to emphasize that his concept is that of a physician as well as an educator. Dr. Hardin strongly believes that the primary function of a medical school is to train doctors of medicine, and that involvement in extensive patient care unrelated to teaching and research functions should be resisted.

PHYSICIANS MUST BE SELF-SACRIFICING

Recent public opinion surveys indicate that even though physician "favorability" has decreased somewhat during the past few years, the medical profession still tops the list insofar as prestige and status are concerned. As physicians, we must be diligent in our efforts to maintain and deserve that respect. The practice of medicine does not lend itself to the waking hours of the public, nor to week-days only. In some areas of the country, it seems to be old fashioned for a physician to list his private telephone number, or even to take a few minutes to visit with individual patients about their problems and concerns. Physicians have been critical of the tendency of the nursing profession to place emphasis on teaching and administrative responsibilities rather than bedside care. Let us not throw stones from glass houses.

WE MUST REMAIN FREE

If we are to maintain high quality medical care for the people of this country, we must insist that medicine be practiced in an atmosphere of freedom, without interference or control. The practice of medicine cannot and must not be merchandised and marketed like a sack of salt. When the services of physicians are to be represented or sold, the Medical Society must represent and protect the interests of its members. In this connection, the utilization of the usual and customary fee concept in negotiations with all third parties should be underscored. We should no longer concern ourselves with fixed fee schedules, but should concentrate on the implementation of the usual, customary and reasonable fee concept.

Our efforts should be directed toward maintaining close liaison with all professions, perhaps through the formation of a strong interprofessional organization which would include physicians, dentists, pharmacists, veterinarians, nurses, lawyers, engineers, CPA's, teachers, and many others of professional standing. It is sad to note that the teaching profession has sacrificed much of its professional recognition in the interest of financial gain through collective bargaining.

Physicians in private practice should take an active interest in current medical education, as well as in the young men and women who are being trained to become doctors of medicine. We should see to it that these young people become well informed on the philosophy and structure of organized medicine. Residents and interns should be invited and encouraged to become active in county medical societies, wherever they may temporarily be located.

However, by the same token, we should not attempt to pamper medical students with excess outside financial assistance, to the point where hard work is no longer appreciated or respected, and reward is accepted as a matter of right, rather than as recognition for services well rendered. We should attempt to indoctrinate our medical students on the traditions and art of medicine, in addition to the science of medicine. We should not forget that the future of our profession depends upon the attitude of the present medical student.

Medical ethics constitute a way of life for physicians, and I recommend that one county medical society meeting each year be devoted to a review of these principles. Let us not be hypocritical, and neglect or ignore ethics that have been formulated and tested over the past hundreds of years. Times and circumstances change, but principles do not.

WE MUST HELP TO SHAPE OUR NATION'S LAWS

The future of the practice of medicine depends a great deal upon what happens in the voting booth. It behooves us to elect men to office who are friendly to our concepts and basic philosophies, and we must support such individuals with both our time and money. We should engage in and be enthusiastic about politics, and should support the candidates of our choice. I hope that no one in this assembly today lives to see the end of the bipartisan system in this country. If that ever happens, it will mean the end of our much-loved democracy.

LET US UTILIZE OUR MEDICAL SOCIETY

As we think about the future, it is probably time for us to take a good look at ourselves and our medical organizations. Are our bylaws geared to present day problems and economies? Is our organizational structure—state and national—adapted to our modern socio-economic state?

Are we, as individual physicians, keeping informed not only on scientific advances, but on the various proposals, laws and philosophies that may affect the way we practice our profession in the future?

I should emphasize that a primary objective of the IMS is to keep you informed on all issues of interest and importance to our profession—through the JOURNAL, the NEWS BULLETIN, special meetings and conferences, and personal contacts. A great amount of time and effort is expended on these various informational programs, but their success depends on whether or not individual physicians read what is provided and listen to what is said.

Out of necessity, of course, all Society business is channelled and correlated through the headquarters office by your officers, committee personnel and staff. The 250 men and women who devote their time and talent to Society projects and activities do so in your behalf.

I wish it were possible for every member of the Society to be an officer or to serve on a committee. However, no physician is precluded from stating his views on any matter of concern to him—either to the officers or, through reference committees, to the House of Delegates. The services of the officers and staff, and the facilities of the headquarters building, are available and open to all members of the IMS.

In recent years, there has emerged a hard core of medical educators at the national level who believe they are better equipped to guide and direct the destiny of organized medicine than even the AMA. I couldn't disagree more. Medicine has progressed and prospered, not as a result of medical education alone, but through the collective efforts of the AMA and its constituent societies.

No one is more aware than I that annual state medical meetings do not appeal to all specialty groups and to all scientific tastes. But, may I remind you that each specialty organization schedules its own scientific meetings and seminars. It is at the IMS Annual Meeting that attempts are made to take appropriate action to satisfy the interests of *all* physicians so that they can practice medicine freely and in the best interests of our patients—without outside interference and control.

No specialty group can accomplish for you what your parent organizations—namely the IMS and AMA—have done and will do. What their future —and yours—shall be depends upon the interest and activity of individual physicians—and upon the united support of all physicians.

A Year of Dedication and of Challenge

President-Elect's Address

SAMUEL P. LEINBACH, M.D.
Belmond

THE 12 MONTHS BEGINNING with this annual meeting are to constitute a Year of Dedication for the Iowa Medical Society. If you will let me play with that phrase a little more, I'd like to say that in some respects the coming year is to be a Year of Rededication, for we physicians have always been dedicated men and women—dedicated to the well being and other best interests of our fellow-man. Consequently, the events that I shall list for you will serve as reminders to us physicians—and to the public at large—that each of us, in his own medical practice, and all of us together, as the Iowa Medical Society, work unceasingly to safeguard and maintain the health and happiness of the people of Iowa.

A CROWDED CALENDAR

The principal occasion for our Year of Dedication is the completion of the new headquarters building at 1001 Grand Avenue, in West Des Moines. If you haven't, I urge you to inspect it.

Our Year of Dedication is to center about the new IMS office building, though some of the events will occur outside of it. The dedication of the Walter L. Bierring Room, in our new building occurred on Saturday, April 23, as many of you know.

The second principal event in our Year of Dedication will be the burial of a Time Capsule at our headquarters building during July. Its contents, of course, will include an issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY, a copy of the AMA NEWS and other appropriate memorabilia of organized medicine at the state and national levels, but the principal items will be those submitted by county medical societies throughout the state. I want to ask each of you to tell your colleagues about this project and to see that a committee is appointed, or that other preliminary steps are taken to make sure that your local organization has a significant part in the Time Capsule ceremony.

Third of the events in our Year of Dedication will be the Iowa Medical Society's participation in the "Hall of Health" which the Iowa Interprofessional Association is to exhibit at the Iowa State Fair, August 17 to 29. As I am sure you know, the IMS had a display at the State Fair last fall that urged people to seek immunizations, principally against tetanus, and highlighted the objectives and activities of the Iowa Medical Foundation. The 1966 exhibit will be a much larger one; it will attract even greater attention from fairgoers, and it will point up the coperation that exists between physicians and the members of other health professions in Iowa.

Fourth of this year-long calendar of events will be our annual Fall Conference for County Medical Society Officers and Other Representatives, to be held in Des Moines on Sunday, September 18, the day before the annual meeting of the Iowa

Chapter of the American Academy of General Practice. As yet it is too early for me to tell you the contents of that program, for we try, at the Fall Conference each year, to present up-to-the-minute problems and projects with which county medical societies can most effectively deal. However, as has been suggested in the Suplementary Report of the IMS Rural Health Committee which is in the packets that have been given you at this meeting, it is likely that some of the presentations will deal with the hazard of organophosphate poisonings. You can be sure that many other timely subjects will be covered.

The formal dedication of our new building is fifth in this year-long list. It will take place on Sunday, October 9. Your officers have thought it advisable to hold the dedication after considerable numbers of people have had an opportunity to familiarize themselves with the structure, and when attention can be better focused upon the dedication—or, as I have said, the *rededication* of Iowa physicians and of their Iowa Medical Society to the well being of all Iowans.

The dedication of Iowa physicians to the future of medicine will be typified by all of these events, but principally by Senior Day, an annual event in Iowa City during the late winter or early spring. At that time, IMS representatives honor the senior students at the U. of I. College of Medicine. I have ceased, at this point, to number the dedicatory occasions, for as you will see in a moment, they begin overlapping one another.

The Hawkeye Science Fair, to be held in Des Moines on April 7 and 8, 1967, will be further evidence of physicians' devotion to education, since for the ninth time, the IMS is to be one of the sponsoring groups.

At their convenience, throughout our Year of Dedication, county medical societies are each invited to hold one of their regular meetings at the new IMS headquarters building. As a result, your officers hope, increased numbers of doctors will get a first-hand acquaintance with the physical facilities of their state organization, and will be encouraged to utilize the services of the staff members for the ultimate benefit of their patients.

Finally, between November, 1966, and March, 1967, the IMS plans to hold a series of five public lectures at its new headquarters building, under the sponsorship of the Iowa Medical Foundation. They are expected to help familiarize lay people in Iowa with the eagerness of the Iowa Medical Society to serve them, and also to spotlight the Iowa Medical Foundation as a public service institution that is deserving of their gifts and bequests.

At this point in my remarks, I conclude my list of the dedications that we plan for the coming 12 months, and call to your attention the Special Schedule of Events folder which will be provided to each member of the Society.

MEDICARE

The year 1966-1967 will be a Year of Challenges for our organization and for the medical profession generally. I hardly need tell you that Medicare is the greatest of those challenges. A principal reason which physicians had for opposing Medicare when it was no more than a proposal was that it endangered their freedom to treat their patients without bureaucratic interference. Now that Medicare has become law, the danger is greatly intensified. Furthermore, medicine is compelled to help make Medicare work, for otherwise we can be sure that physicians will be made to appear the villains in a nationwide drama. What physicians—and I mean what every physician—can do is to hold government at arm's length, so as to preserve the free practice of medicine under the newly-imposed circumstances. Because the payment mechanism utilized in Medicare can be the means by which government gains control over physicians' practices, doctors must concern themselves particularly with the method by which their fees are computed and paid.

The IMS can take some credit for pioneering the "usual and customary fee" concept for third-party medical services programs, or if not, it can claim major credit for popularizing it among physicians throughout the country. The IMS proposed it, and got it adopted for the MAA program in Iowa three years ago. It has worked. Another highly desirable feature of the MAA arrangement, as it was originally set up, was the independent fiscal administrator standing between government and the doctor. Next, two commercial health and accident insurance companies undertook to use the "usual and customary" principle in compensating physicians for care provided under contracts with large industries in eastern Iowa. Again the plan worked to everyone's satisfaction.

Last fall, after Congress passed Medicare, Iowa's representatives in the AMA House of Delegates persuaded their fellow members of that body virtually to reject the "prevailing" fee concept and, instead, to endorse the "usual and customary fee" for all negotiations with third parties, both governmental and private. The federal government seems willing to accept the usual and customary fee concept for determining fees under Medicare, and negotiations are underway between the IMS and the federal government for its use in the Military Departments' Medical Care program in Iowa.

All of you understand, I am sure, that organized medicine and the federal government must agree on physicians' fees, even though a majority of physicians may not plan to accept payment directly from the government. The reason is that the patient's partial reimbursement must be whatever the government chooses to pay, and if a physician's charges and the government's reimbursements differed significantly, the patient's anger probably

would be directed at the physician. As things now stand, however, the Medicare law provides that physicians are to receive their "reasonable" charges for care rendered elderly patients, and the government seems at the moment willing to accept "usual and customary" fees as reasonable ones.

Now I come to the method of payment in Medicare cases. Under Part B of Medicare, I anticipate that the vast majority of physicians will choose to look to their patients for payment, rather than to the federal government. They are quite free to do so, and by that means they can most effectively keep government at arm's length. The doctor who chooses *not* to accept an assignment can bill his patient, and when the patient has paid the bill in full, by means either of cash or of a promissory note, the doctor can receipt the bill, thus enabling the patient to seek partial reimbursement from the government. That, in my personal opinion, is the course of action which each doctor should consider seriously.

As the IMS recommended, Iowa Blue Shield has been appointed fiscal intermediary for Part B of Medicare in Iowa. The IMS officers supported Blue Shield's application because they felt sure they could effect an arrangement with Blub Shield under which the IMS might represent Iowa physicians as a group, rather than leave them at the distinct disadvantage of having to deal individually with a fiscal agent of the federal government. Such an arrangement, I am glad to say, has been worked out and is now in effect.

Now that Iowa Blue Shield has been named fiscal intermediary for Part B of Medicare: (1) the IMS will provide information to Blus Shield about physicians' usual and customary charges, but only as much of such information as is necessary; (2) through county medical society fee committees, the IMS will coordinate the adjudication of any disputed fees; and (3) the IMS will take a major part in physician-relations and public-relations programs concerned with Part B of Medicare.

BLUE SHIELD

A development that I am sure has pleased you just as much as it pleased me is the vastly improved understanding between the Blue Shield Board of Directors and the IMS, and I can assure you, my efforts will be directed toward further strengthening of these relations.

THE DEBAKEY PROGRAM

Another of the major challenges that medicine faces in 1966-1967 is the need for limiting the implementation of the Heart Disease, Cancer and Stroke Amendments of 1965—the so-called DeBakey Program—so that it will do no damage to medical care as we have known it. As originally conceived, it proposed (1) to develop expertise in the treatment of those three conditions at regional centers; (2) to centralize care for all patients with those diseases at the regional centers; and (3) to use the regional centers in disseminating new technics in the management of those particular diseases to physicians practicing in the surrounding districts. The program consequently had a disease-centered approach.

The report of our Society's DeBakey Committee, pointed out that the Committee on Interstate and Foreign Commerce of the U. S. House of Representatives, in its report on the DeBakey Bill, emphasized that, if enacted, it should be administered "in such a way as to make no change whatsoever in the traditional methods of furnishing medical care to patients . . . or methods of financing such care." And the Bill, as finally passed, provided funds for no more than some investigations to determine the need for programs to improve the diagnosis and treatment of heart disease, cancer and stroke.

The IMS DeBakey Committee recommended such a study for Iowa, and your Board of Trustees endorsed that recommendation—i.e. a study to determine need only. However, we shall exercise close surveillance over the survey. At a meeting of the IMS Executive Council on March 17, Dr. Ober reported on a session of the Regional Advisory Committee of the Iowa Regional Medical Program, held in Iowa City on March 2, at which representatives of a California firm of researchers said their organization had volunteered to survey Iowa's needs free of charge, as a sample of what their organization could do.

TITLE XIX OF THE SOCIAL SECURITY ACT

Title XIX of the Social Security Act is another innovation that challenges us—though less immediately, since it cannot take effect before January 1, 1967. It will provide benefits for medically indigent people of all ages equal to those available to the elderly under Medicare, beginning no later than July 1, 1975. The 1967 General Assembly of Iowa will be asked to enact enabling legislation for Title XIX, and we physicians, individually and collectively, must watch closely to make sure that it enacts a law that is in the public interest.

IMPAC

Of course the very best way to make sure that only good laws are passed is to see that competent and responsible lawmakers are elected. On the national level, I have been assured, we have a very good chance of blocking the Administration's announced plan for extending Medicare to younger age groups by electing a strong opposition in Congress this year. On the state level, the chances are even better that, by electing legislators who are sympathetic to our point of view, we can cause the Title XIX enabling act to require the payment of usual and customary fees and the employment of an independent fiscal administrator, as we suc-

ceeded in doing when MAA was set up. If we are to do those things, we must give of our time and of our money—first and foremost to the Iowa Medical Political Action Committee (IMPAC).

CONCLUSION

In concluding, I want to pay tribute to the immediate past-president of the Iowa Medical Society, Dr. Frank Ober. First, I express my appreciation for his thoughtfulness. In delegating responsibilities to his fellow officers and to the IMS staff members, he has been most considerate both of other demands upon their time and of the natural limits of their energies. More than most of us, he is dedicated to the belief that medicine is a great and honorable profession, deserving of all that we can do for it. He has been sincere, tenacious and effective in opposing the proposals that threaten medicine, and in supporting those that will benefit it. During the past two years, first as president-elect and more recently as president of our Society, he has expended tremendous amounts of time and effort on behalf of the rest of us in the service of our profession. I know that I express your feelings as well as my own when I say, "Thanks, Frank; you have been an outstanding leader and a real inspiriation to all of us."

Finally, this will be the year that will see the impact of the most drastic legislation in the total history of our country. I hope for your consideration. I sincerely ask for your advice and for your help in protecting the effectiveness of the profession that has done most for the well-being of Americans.

The Legal Responsibilities of Physicians Under Medicare

FRANK C. COLEMAN, M.D.
Tampa, Florida

MY TOPIC IS A LEGAL ONE, and since obviously I am no lawyer, I have consulted the Law Department of the AMA about what I should say.

In the past, under our American system, the federal government usually has assumed social obligations piecemeal—one by one—rather than by deliberate choice and long-range planning. This has been true of various federal health programs. For example, the U. S. Public Health Service, responding to specific needs or requests, has increased the comprehensiveness of its program and the size of its budget by ten-fold in a dozen years, without any change in the law that governs its operations. Likewise, the cost of the Veterans Administration medical program has been increasing steadily over the years.

Now, however, we face a new and different situation. President Johnson, in his recent message to Congress on health and education, has taken a bolder, more direct approach. He has proposed a larger and explicit commitment by the federal government in the field of health and health-care. He has espoused the philosophy that good health for every citizen not only is a national ideal but also is the responsibility of the federal government. In so doing, he has suggested numerous programs which represent a dangerously expandable blueprint for a complete federal approach to health care.

Therefore, in the months and years immediately ahead, the debate in Congress must involve not only money, costs, budgets and taxes. It also must center on the issue of whether the American people want to revolutionize their system of medical care by shifting responsibility from a base that is still largely private and local to one which would be public and national.

This issue is of vital, particular concern right now because of two factors. First, current and proposed programs in health and health care make up only a part of the ultimate, total commitment suggested in the broad field of health, education, public assistance, welfare programs and related areas. Second, and of even more immediate interest, is the fact that Congress, just last year, passed two major pieces of health legislation which will be taking effect as these remarks of mine are published. Their guidelines and regulations are still under discussion. The initial impact and final effects of these new laws are still matters of local and national conjecture.

The first session of the Eighty-ninth Congress, last year, enacted 18 major health bills, most of which were put together hastily and without careful consideration. The two of greatest importance,

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Dr. Coleman is a pathologist who practiced in Des Moines until about 18 months ago. He is a former member of the AMA Council on Legislative Activities.

most immediate concern and greatest danger are the Medicare Law and the Heart Disease, Cancer and Stroke Amendments.

Here, I shall confine my remarks to Public Law 89-97, the so-called Medicare Law, which has been described as the biggest social welfare measure in our history. It will touch the lives of virtually all Americans—most immediately the more than nineteen million persons who are over 65 years of age, and the hundred million persons who pay taxes. It will start out having an estimated cost of $4½ billion per year, and its cost will go up from there at an unpredictable rate. About 10,000 additional federal employees will be required just to administer the program. It will directly affect every physician who treats persons 65 years of age or over. It will directly affect hospitals, nursing homes, home health services, nurses, therapists and the personnel of all the other health professions. It will require thousands of words and hundreds of pages to detail the regulations covering mechanisms, procedures and rules for implementation.

This, it has been said, is a time of ominous tranquility in the house of medicine. A major battle in the war against government socialized medicine has been lost. Medicare is now the law of the land, and the battleground has shifted from the halls of Congress in Washington to the offices of the Department of Health, Education and Welfare, in Baltimore, where teams of doctors representing organized medicine have been doing their utmost to negotiate regulations which will give some degree of palatability to an unsound law. It is too early to predict what the outcome will be, and it may be several years before the final form of the Medicare program takes shape.

In this contest, medicine is resisting not only government domination but hospital domination as well. The American Medical Association has selected some of the best and shrewdest men in medicine to represent the profession at this crucial time when the basic principles of Medicare regulations are being formulated in Baltimore and Washington.

But don't expect miracles. Don't expect medicine's representatives to undo the basic flaws of the law itself. There are sure to be forms that must be executed in duplicate, triplicate or even quadruplicate. There will be certifications and recertifications. If some doctors have found it difficult to practice medicine with a carrier as the third party, they will find it more difficult with the government as fourth party and a hospital utilization committee as fifth party!

It is not my intention to paint a picture of hopeless pessimism for you. Nor do I want you to believe that this period of superficial tranquility signifies that completely peaceful coexistence has been achieved. If government medicine is to be contained, there must be planned, rational action from a united and alert profession.

With respect to the physician's responsibility under Medicare, I could tell you that the Medicare program is entirely voluntary as a matter of law. That is, the physician is free to participate or not to participate, as he chooses. However that would not be a wise statement for me to make. A pediatrician or an obstetrician doesn't have to be concerned with Medicare patients. But for the average doctor, freedom to non-participate might be no more than the freedom to curtail a substantial segment of his practice. As a practical matter, nonparticipation is not entirely a voluntary matter, if the doctor who is dependent upon his professional income will sustain a severe economic loss through nonparticipation.

In the context that I have used the term *nonparticipation,* I have intended it to mean total nonparticipation. There are, of course, varying degrees of participation or cooperation with the Medicare program. A physician may be unwilling to assist his patients in obtaining benefits under either Part A, the hospital-insurance program, or under Part B, the medical-insurance program. This is his decision to make, and the AMA Judicial Council has stated that ordinarily he may ethically choose to follow this course, provided he so advises his patient in advance of treatment. As a matter of law, the individual doctor may refuse to participate or may limit his participation under Medicare as long as doctors do not engage in a group, organized boycott. Group action would involve the medical profession in liability under the Sherman Anti-Trust Act.

Before a hospital can be paid for the hospital services rendered to a patient, the law requires that the patient must sign a request for hospital services. If it is impractical for the patient to sign the request, another person may do so for him. The second requirement that must be met before the hospital can collect for services rendered is a certification, signed by a physician, that hospitalization is medically required for treatment or for diagnostic study. Legally, this certification need not be made by the patient's doctor. Any doctor having knowledge of the facts can execute the certification. As a practical matter, however, hospitals will require, or attempt to require, the patient's doctor to do the certifying.

Initially, the doctor hospitalizing a patient will have to make a determination whether the hospital stay is really required for purposes of medical treatment or diagnosis. Under numerous circumstances a physician may wish to hospitalize a patient for treatment, not because hospitalization is medically required, but simply because it may be preferable to home treatment. Conditions in the patient's home may not be conducive to the best treatment, or the patient may prefer to be hospitalized.

Does the term *medically required* mean that the nature of the patient's illness precludes treatment in the home because of the need for particular facilities available only in a hospital? Would the doctor run into difficulties if he were to hospitalize a patient for an ailment ordinarily treated at home? Would it suffice if the doctor could show that the particular circumstances in the patient's home had been responsible for his decision to hospitalize the patient? If overutilization of hospital facilities becomes an acute problem, I suspect that the government may take a hardnosed position. Particularly with dependent old people, however, the pressure will be great to hospitalize.

The most troublesome area of physician involvement in the Medicare program, as I see it, will be utilization review. A participating hospital must have a utilization-review plan. The plan must provide for a review, on a sample or other basis, of admissions to the institution, durations of stays and professional services furnished. The plan must also provide for a review of individual cases, on a case-by-case basis, with reference to hospitalizations of extraordinary duration.

The review must be made either by a hospital-staff committee composed of two or more physicians, with or without the participation of other professional personnel, or by a similar group from outside the institution. The utilization-review committee may be established by the local medical society and some or all of the hospitals in the locality. If a committee of this nature has not been established, the Secretary of Health, Education and Welfare may provide other means of utilization review. The utilization-review committee will have responsibility for notifying the patient and his attending doctor if the committee finds that a further stay in the institution is not medically necessary.

Ironically, the medical profession, which has fought government so zealously for more than 20 years, has been chosen—or, more properly, has been drafted—to act as watchdog over the government's expenditures for hospital benefits under Medicare. Not one cent may be paid to any hospital on behalf of any Medicare recipient unless a physician gives his certification of medical necessity for such services. And not one cent may be paid for hospitalization after a utilization-review committee composed of doctors has determined that further hospitalization is not medically necessary.

Actually, with respect to the initial impact of Medicare, there are differences of opinion and prediction, locally and nationally. We know that there will be increased pressures and demands, but none of us can really tell what their extent will be. For example, a recent story in a Chicago newspaper pointed out that the Chicago area has 500,000 residents 65 years of age or older, and that the city's 25,000 hospital beds already are operating at 80 per cent of capacity. The article predicted that Chicago hospitals would be jammed to overflowing by the end of July, and would stay filled after that.

Everyone is not so pessimistic, however. On the national level, for example, Social Security Administrator Robert M. Ball recently expressed the opinion that the advent of Medicare would not create a severe shortage of hospital beds across the nation. He foresaw an increase in hospital admissions of "not more than five per cent" following July 1. On the other hand, a western hospital comptroller estimates a 24 per cent increase in hospital days for patients over 65.

Most people close to the problem, whether in or outside the medical profession, believe that the greatest long-range difficulties will come in the field of home care—requiring many more nurses, practical nurses, therapists, and other personnel for home visits—and in the area of nursing-home facilities. In this connection, for example, federal officials said recently that about two-thirds of the nation's nursing homes will be temporarily ineligible to participate in Medicare, under the stringent standards announced on March 18. The government officials estimated that facilities with 500,000 of the 760,000 beds in licensed nursing homes would not qualify. Most of them would need additional medical or nursing supervision, or additional fire and safety protection at the time the extended-care benefits start, next January 1.

At any rate, whatever the impact of Medicare may be after July 1, and again next January—whether an avalanche, a modest increase in demands or almost no increase at all—we can be sure of two things. First, there is a need for a public-information program to reduce the amount of anger, frustration and disappointment among Social Security beneficiaries who may be uninformed or misinformed about the actual coverage provided by Medicare. As a corollary, there also should be vigorous programs to publicize the various voluntary health-insurance plans being developed by Blue Cross, Blue Shield and the private insurance companies to supplement or complement the limited benefits of Medicare.

Second, there will be a continuing need for effective information programs to prevent or minimize abuse and overutilization of Medicare benefits. Here, I believe, business and industry can be of special help to the medical profession. Many companies already operate educational programs in such areas as safety, accident prevention, occupational health, etc. The development of information programs to help prevent unnecessary use of the hospital and other benefits of Medicare could be especially effective among older employees and those already retired on company pension plans.

Thus, the war which began 20 years ago will go on. We have lost a battle, but it was not the end. It was the beginning of a larger struggle which will make increasing demands upon us, individually and collectively.

More than 19 million people will begin, on July 1, to depend on the government for their health care. Those millions will accept this program and learn to take it as a matter of course. For our part, we in medicine must try to make the law produce whatever good it can for our patients and for the public, while reducing its harmful effects on our health system as far as possible.

But let's not forget that there are almost 180 million people in this country—about 90 per cent of the population—the vast majority of whom are receiving their health care from private enterprise and non-governmental mechanisms. Let us remember that last year more than 151,000 people voluntarily purchased health insurance. They made a substantial investment, and certainly their doing so must be interpreted as an overwhelming vote of public confidence in the system. The preservation of a private, competitive atmosphere for those citizens and for the doctors who serve them must ever be our objective.

We members of the medical profession shall continue doing everything possible to provide the best possible health care for all Americans, regardless of age. At the same time, we shall continue to work for any changes, modifications or amendments which we think are necessary in health care legislation—either already enacted or merely proposed.

Above all, we shall continue to fight vigorously against the philosophy that the federal government should assume the main responsibility for financing and providing health care for all citizens, regardless of need.

Preceptorships

Because students at the U. of I. College of Medicine can take their preceptorships at any convenient time following the completion of their junior year, the ensuing list includes preceptorships that occurred in 1964 or early in 1965, as well as more recent ones. As indicated, the preceptees now have their M.D. degrees and have started their internships.

The faculty of the College of Medicine and the membership of the Iowa Medical Society are grateful to the preceptors.

PRECEPTORS	PRECEPTEES
Andersen, Kenneth N., M.D., Center Point	James O. Hoover, M.D.
Armstrong, William S., M.D., Marion	Richard A. Dimond, M.D., and Roger A. Miller, M.D.
Baird, William A., M.D., Ames	Donald D. Brown, M.D.
Baker, John M., M.D., Mason City	Paul T. McGarvey, M.D., and Gene E. Swanson, M.D.
Barnes, Arthur E., M.D., Cedar Rapids	Terry R. Maxon, M.D.
Bastron, Harold C., M.D., Red Oak	Clarence A. Hassan, M.D.
Bennett, F. William, M.D., Marion	Joseph R. White, M.D.
Blair, James B., M.D., Cherokee	Paul D. Boone, M.D.
Bliss, William R., M.D., Ames	William C. Boyd, M.D., Stephen R. Jones, M.D., and James J. Wanken, M.D.
Bozek, T. T., M.D., Iowa City	Jon F. Bergstrom, M.D., Michael B. Croxdale, M.D., John J. Fangman, M.D., and Victor T. Wilson, M.D.
Button, Glendon D., M.D., Conrad	Dohn E. Kruschwitz, M.D.
Byram, Burns M., M.D., Marengo	Darryl L. Dochterman, M.D., Robert J. McGregor, M.D., and David M. Wall, M.D.
Caraway, L. Dean, M.D., Monticello	Maynard F. Lang, M.D.
Couchman, Phillip G., M.D., Mount Pleasant	John A. Richmond, M.D.
Crabb, Dayrle N., M.D., Denison	Robert H. Osborn, M.D.
Crowley, Paul J., M.D., Davenport	Bernard J. Cahn, M.D.
Downey, E. M., M.D., Guttenberg	James G. Geisinger, M.D.
Elliott, O. A., M.D., Des Moines	Sharon D. Hamill, M.D.
Faber, Luke A., M.D., Dubuque	William L. Benson, M.D.
Ferguson, Paul, M.D., Lake City	John T. Chambers, M.D., Douglas J. Holt, M.D., and Dennis D. Wilken, M.D.
Fry, G. A., M.D., Vinton	Roger T. Pacanowski, M.D., and Donald J. Tesdall, M.D.
Gallagher, John P., M.D., Oelwein	Paul S. Curtis, M.D.
Garvy, Andrew C., M.D., Iowa City	David E. Stearns, M.D.
Gilfillan, Edwin O., M.D., Bloomfield	Dennis L. Boatman, M.D.
Goetz, Larry W., M.D., Creston	Melvin J. Richards, M.D.
Goldberg, Louis, M.D., Des Moines	Jonathan D. Winner, M.D.
Harding, Dale A., M.D., Eagle Grove	Ronald D. Nervig, M.D.
Hawkins, Charles P., M.D., Clarion	Charles D. Bendixen, M.D.
Henderson, Walker B., M.D., Oelwein	Karl D. Aldinger, M.D., Paul L. Gjerstad, M.D., Robert A. Holst, M.D., and Bruce L. Reimers, M.D.
Hennessey, John M., M.D., Manilla	Roger E. Murken, M.D.
Hess, John, Jr., M.D., Des Moines	Julian E. Ferstenfeld, M.D.
Jaquis, John R., M.D., Cedar Falls	Kenneth M. Petersen, M.D.
Judiesch, Kenneth J., M.D., Iowa City	Thomas F. Boat, M.D.
Kettelkamp, E. G., M.D., Monona	J. Robert Turner, M.D.
*Knight, R. A., M.D., Rockford	Byron T. Burlingham, M.D.
Kruse, Otto E., M.D., Tipton	John D. Hart, M.D.
Lannon, James W., M.D., Mason City	Robert J. Porter, II, M.D., and Vernon D. Ritzman, M.D.
Lister, Eugene E., M.D., Dallas Center	Vande Garde, Larry, M.D.
McConkie, Edwin B., M.D., Cedar Rapids	David G. Kundel, M.D.
Miller, Donald F., M.D., Williamsburg	Richard W. Friess, M.D.

* Subsequently deceased.

Miller, E. D., M.D., Wellman	Ronald D. Kilzer, M.D.
Miller, Jay R., M.D., Wellman	Robert B. Kammer, M.D., and James A. Merchant, M.D.
Miller, L. A., M.D., North English	Richard L. Fox, M.D.
Mills, Keith F., M.D., Lone Tree	Robert E. Smits, M.D.
Mosher, M. L., M.D., Iowa City	Robert T. Brown, M.D.
Olin, Elvin E., M.D., Dubuque	Thomas T. Edmonds, M.D.
Orcutt, Paul E., M.D., Marion	David E. Brandt, M.D.
Osborn, C. Robert, M.D., Dexter	Janice L. Fleming, M.D., and Joanne B. Rosenberg, M.D.
Osincup, Paul W., M.D., Sioux City	Stanley R. Smith, M.D.
Overton, Roy W., M.D., West Des Moines	Melvin L. Glazer, M.D., and Donovan D. Hanson, M.D.
Paulus, E. W., M.D., Iowa City	Robert E. Cadwell, M.D., Bruce P. Cameron, M.D., James E. Daggett, M.D., Ronald D. Frus, M.D., John B. Hasbrook, M.D., Roman Hiszczynskyj, M.D., John T. Madden, M.D., Ross A. Madden, M.D., Dale T. Mericle, M.D., Vance L. Polich, M.D., John E. Schlicher, M.D., Harry C. Smith, M.D., Reinert N. Svendsen, M.D., and William A. Sweet, M.D.
Peterson, J. C., M.D., Hartley	Jack Friedman, M.D.
Ransom, James H., M.D., Grinnell	Gerald L. Fry, M.D.
Rominger, Clark R., M.D., Waukon	Carl R. Kruse, M.D.
Sautter, Robert A., M.D., Mount Vernon	John R. Lindholm, M.D.
Stuelke, Richard G., M.D., West Branch	David W. Decker, M.D., Thomas J. Hughes, M.D., Clinton J. Wentz, M.D., Francis J. Whelan, M.D., and Donald G. Wiltse, M.D.
Stumme, Ernest H., M.D., Denver	Darrell L. Witt, M.D.
Sunderbruch, J. H., M.D., Davenport	William S. Barker, M.D., John D. Hoepner, M.D., Philip H. Kohler, M.D., and Jack T. Lane, M.D.
Swaney, Robert L., M.D., Cedar Rapids	Kaye E. Check, M.D., and Gilbert W. Harris, M.D.
Tegler, Wayne J., M.D., Iowa City	Robert F. Godwin, M.D., and Richard A. Myers, M.D.
Trotzig, Joseph P., M.D., Akron	Curtis H. Wait, M.D.
Waterbury, C. A., M.D., Waterloo	J. Donald McPike, M.D.
Watts, C. F., M.D., Marengo	Susan J. Duve, M.D.
Widmer, J. G., M.D., Wayland	John W. Keiser, M.D.
Wright, Thomas D., M.D., Newton	Mary L. Gannon, M.D.
Wright, Thomas G., M.D., Marion	David J. Abel, M.D.

Homemaker Service Conference

The first statewide Conference on Homemaker Service will be held on Wednesday, July 27, at the Memorial Union of Iowa State University, Ames, under the sponsorship of the Iowa Medical Society, the State Department of Social Welfare and the State Department of Health. It is hoped that the sessions will stimulate interest in the establishment of homemaker services in many additional communities throughout the state, and encourage full use of those already in operation.

Women who are sent to the homes of invalids to perform this service have completed a brief training course, and are the employees of a local homemaker-service agency. The eligible families or individuals are those that temporarily cannot perform routine homehold tasks unaided. The housewife may be incapacitated or hospitalized, or senility may be the reason why a single person or a couple needs help. The service may be provided for just a few hours each week, or for longer periods, and the homemaker-service agency adjusts its charges to the client's ability to pay.

In urging physicians and other community leaders to attend the Conference, Dr. S. P. Leinbach, of Belmond, president of the Iowa Medical Society, said, "Anyone whose professional duties relate to caring for the elderly or the handicapped appreciates that the desire to live in one's home is basic at all ages. With some help, families can be kept together and the elderly can be allowed to remain in the environment which they love so dearly. Thus, the Homemaker-Home Health Aide program is abundantly needed, and where implemented in Iowa, it has proven exceedingly successful."

Dr. William J. Morrissey, of Des Moines, is the planning chairman for the Conference.

9:00 a.m. OPENING REMARKS—Dr. Leinbach, Mr. Arthur Downing, chairman of the State Board of Social Welfare, and Dr. Arthur P. Long, state commissioner of health

9:15 a.m. "What Is a Homemaker Service?"—Dr. Frederick C. Swartz, chairman, AMA Committee on Aging

10:00 a.m. "Welfare Oriented and Operated Programs"—Mrs. Gladys Lawson, national specialist in Homemaker Service, Children's Bureau, HEW Department

10:45 a.m. "Homemaker-Home Health Aides—Their Relationship to General Health Services"—Eileen Lester, consultant, Home Health and Related Service Branch, USPHS Division of Medical Care Administration

1:00 p.m. OPERATIONAL PROGRAMS—Mrs. Frances Shambaugh, director, Polk County-Des Moines program; Mrs. Jessie Stern, director, Linn County program; Mrs. Ilene Jury, supervisor of homemaker service, Dubuque County Department of Social Welfare

2:00 p.m. WORKSHOPS

1. Organizing a Service
2. Recruiting, Training and Supervising Homemakers
3. Finances
4. Operational Problems of Existing Agencies

3:15 p.m. PANEL SUMMATION

4:00 p.m. ADJOURNMENT

Scientific Articles

The Use of Drugs and Diets in the Control Of Coronary Heart Disease

WILLIAM E. CONNOR, M.D.
Iowa City

THE RECENT STUDIES of the epidemiology of coronary heart disease have led to the concept of the "coronary prone" individual. Such a person, as characterized especially by the United State Public Health Service study in Framingham, Massachusetts, is a male, is usually overweight, smokes cigarettes, is hypertensive and has a reduced vital capacity. Above all, however, he has an elevated serum cholesterol level.[1] This hypercholesterolemia is genetically derived, and correlates well with a positive family history of coronary disease. Now that these high-risk factors have been identified, coronary-prone individuals can be identified before the clinical manifestations of coronary heart disease occur. It consequently is of prime importance for physicians to provide effective measures for the reduction of risk and for the prevention of coronary heart disease.

Since the obstruction to blood flow in this disease occurs largely as a result of the cholesterol-rich atherosclerotic plaque, the origin of the cholesterol in the plaque is crucial. In other words, the important question is, "Where does it come from?" The initial impression was that the arterial wall itself could synthesize all of the cholesterol contained in it, but recently several investigations with cholesterol-4-C^{14} have led to the firm conclusion that the cholesterol of the atherosclerotic plaque is derived from plasma cholesterol, and that it accumulates in the arterial wall when its level in the blood is high.

With this concept in mind, let us direct our attention to the regulation of the cholesterol concentration in the plasma, for if plasma cholesterol is maintained at a low but healthy level throughout a patient's lifetime, any "atherosclerosis" of clinical consequence can largely be prevented.

LABILITY OF SERUM CHOLESTEROL LEVELS

In human beings, high serum cholesterol levels usually respond readily to certain changes in the diet. Figure 1 is the record of a typical experiment. During Period II, the serum cholesterol levels of three men were made to decline greatly, from 220 mg. per cent to 156 mg. per cent.[2] The low level continued for 11 weeks, or as long as a low-cholesterol diet was fed. The other three men were given a high-cholesterol diet and had increased serum cholesterol levels during the same period. This study emphasizes the lability of the serum cholesterol level in almost all human beings. Note that significant changes in serum cholesterol levels occurred within 10 to 14 days after dietary changes. Thus, there is an excellent prospect that serum cholesterol levels can be manipulated in individuals at high risk for coronary heart disease.

DRUGS FOR LOWERING SERUM CHOLESTEROL LEVELS

The technics for affecting lipid metabolism and serum lipid concentrations can be divided into two general categories: drugs and dietary measures. For some patients, one must use a combination of diet and drugs to achieve the desired effect. The currently used drugs which affect lipid metabolism

Dr. Connor, an associate professor of internal medicine at the U. of I., made this presentation at a "Symposium on Newer Developments in the Control of Coronary Heart Disease," during the Iowa Medical Society's 1965 Annual Meeting. A paper from the same symposium by Dr. W. L. Proudfit immediately precedes this one, and other papers from it by Dr. John C. Hoak, of the U. of I., and Dr. Wm. B. Kannel of the National Heart Institute's Framingham Study, appeared in the January, 1966, issue of the JOURNAL.

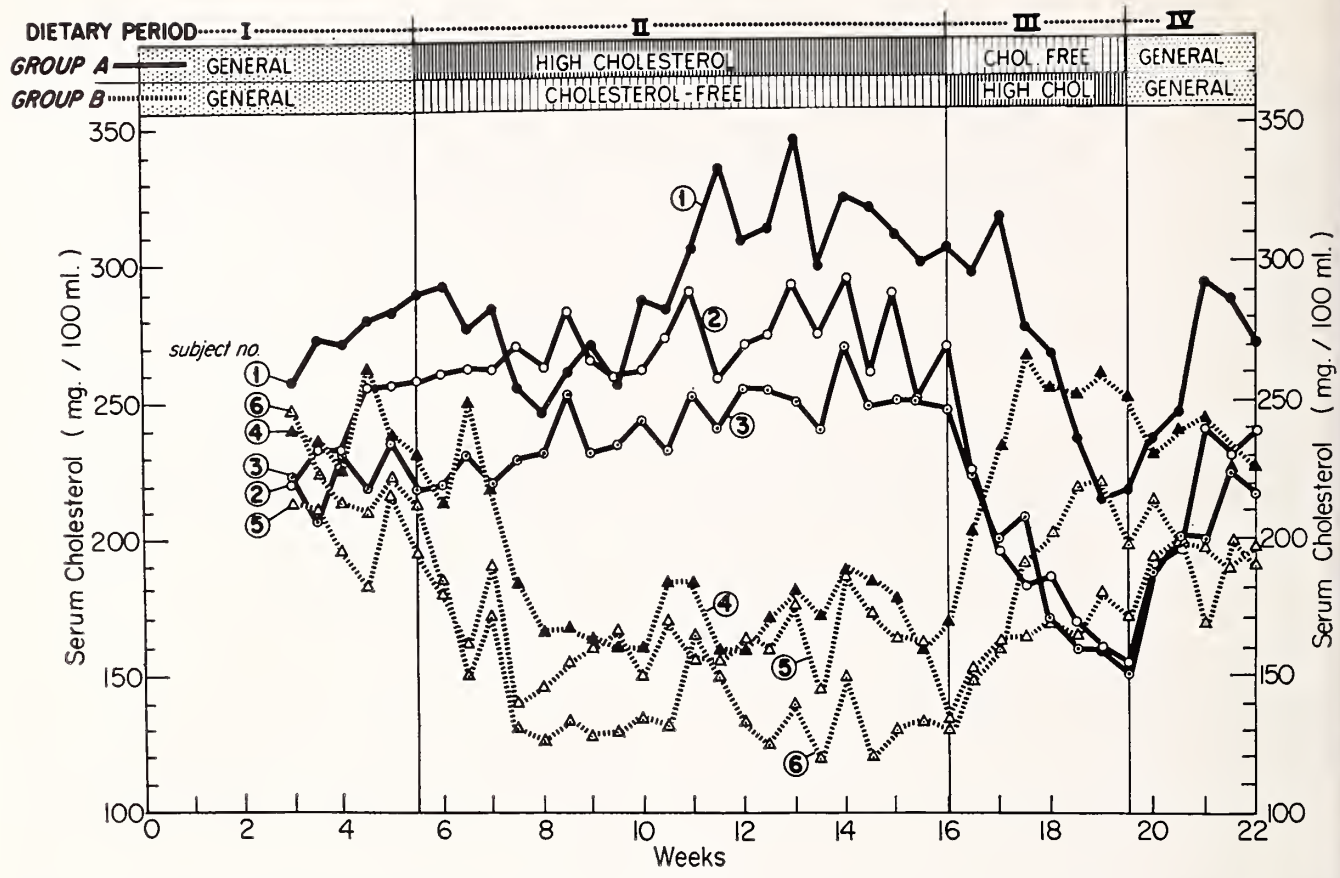


Figure 1. The serum cholesterol levels of six men who received a series of diets which contained differing amounts of cholesterol but were balanced as regards nutrients.

are listed in Table 1. One of the older methods of lowering serum cholesterol levels is through the use of sitosterol (Cytellin®) taken orally. This agent is a plant sterol which is also present in many foods of vegetable origin. It acts by preventing the intestinal esterification of dietary and endogenously excreted cholesterol, so that cholesterol absorption is blocked and serum cholesterol levels then decline.

A second method of controlling serum lipid levels is to enhance the conversion of cholesterol to bile acids by promoting the excretion of bile acids in the feces. Bile acids provide the chief excretory pathway of cholesterol. Cholesterol is converted to bile acids in the liver. Most of the bile acids are reabsorbed after reaching the gut via the bile duct. The drug, cholestyramine, is an unabsorbable resin taken by mouth. It binds bile acids in the small intestine, prevents their usual reabsorption, and carries them out in the feces. This agent represents a significant advance in the therapy of hypercholesterolemia. It has the disadvantage of being bulky and having a somewhat unpleasant taste, but product improvement may eliminate these features in the future.

TABLE 1

DRUGS FOR LOWERING SERUM LIPID LEVELS
(Classified According to Mechanism of Action)

1. To prevent cholesterol absorption.
   - Sitosterol
2. To enhance cholesterol excretion (as bile acids).
   - Cholestyramine
   - Dextro-thyroxine
3. To block cholesterol biosynthesis (toxic).
   - Triparanol
4. Unknown site of action.
   - Nicotinic acid
   - CIPB, chlorophenoxyisobutyrate (Atromid-S®)
   - Estrogens

Another drug which promotes the excretion of bile acids and thus lowers serum cholesterol levels is the isomer of thyroxine, dextro-thyroxine. This agent, which is under clinical trial at the present time, has less effect on metabolism generally than it does upon lipid metabolism specifically. One can usually predict a lowering of serum cholesterol levels when this agent is used in a dose of 2 to 4 Gm. per day (Figure 2). Unfortunately, there may be a rebound after a few months, even though the protein-bound iodine has risen to a high level and the I^{131} uptake of the thyroid gland has declined to zero, as in the patient illustrated in Figure 2. The dose then must be increased if one is to achieve a continued effect. This drug may significantly enhance angina pec-

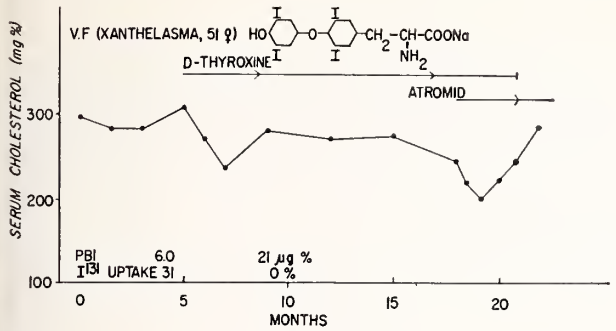


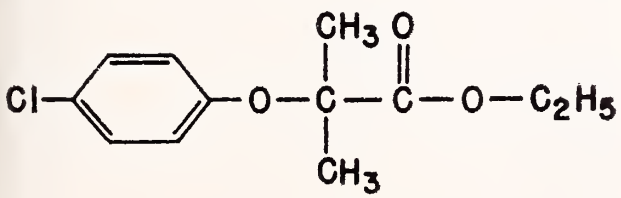
Figure 2. The effects of dextro-thyroxine and Atromid-S® upon the serum cholesterol concentrations in one patient who was maintained on a constant diet. (The formula of dextro-thyroxine is appended.)

toris in susceptible patients with coronary heart disease.[3]

A third method of affecting the metabolism of cholesterol is to inhibit its biosynthesis. It seems to be the least promising approach. We have seen an example of it in the clinical trials of triparanol (MER-29®). Numerous toxic complications resulted, and the drug was withdrawn from use.

A fourth category are drugs which have unknown sites of action, but nevertheless, in many instances, are very effective agents. The first of these is nicotinic acid, which must be used in pharmacologic doses of 2 to 6 Gm. per day.[4] Such doses produce the same undesirable flushing that the usual 50 mg. dose of nicotinic acid causes, and they do have some side effects upon carbohydrate and uric acid metabolism, as well as some adverse effects on certain liver-function tests. Although nicotinic acid is relatively effective in lowering serum lipids, it is not a drug that one would use as a general prophylactic agent. It should be used only in specific instances.

A new preparation now under clinical trial is Atromid-S® or chlorophenoxyisobutyrate (Figure 3). This agent may act in the liver to inhibit the synthesis of triglyceride-rich lipoproteins. Atromid-S offers considerable promise and has not produced any side effects during about five years of use, beginning in the British Isles and



Ethyl p-Chlorophenoxyisobutyrate

(CPIB Ester)

ATROMID

Figure 3. Atromid-S® (chlorophenoxyisobutyrate).

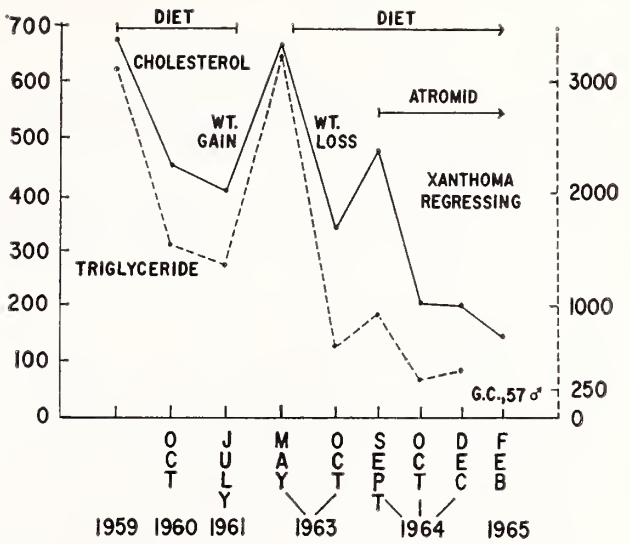


Figure 4. The changes in serum lipids occurring from the use of Atromid-S® in a patient with idiopathic hyperlipemia.

now extending to this country.[5] Its use in a patient is illustrated in Figure 4. The drug was given to an individual whose most characteristic lipid abnormality was an elevated triglyceride level. He was a 57-year-old man with xanthomas and severe aortic and iliac atherosclerosis. When initially seen in 1959, he had a serum cholesterol level of over 600, and his serum triglycerides were 3,000. He was then followed over a six-year period. On diet, he showed some improvement. Later, when he strayed from his diet, he gained weight and his serum lipid pattern underwent a complete relapse. With a subsequent weight loss, there was improvement, but over the five-year period his serum lipids were never within a normal range, despite a rigorous dietary approach to the problem. In September, 1964, Atromid-S was given. His serum cholesterol level declined steadily until it reached a level below 200 mg. per cent. The lowest level he attained was 149 mg. per cent—a striking change in this patient. His serum triglycerides fell to about 240 mg. per cent, and his xanthomatous lesions began to shrink. Atromid-S has special promise in patients with hypertriglyceridemia as well as hypercholesterolemia.

Finally, I want to mention the use of estrogens. Their rationale relates to the lower incidence of coronary heart disease in premenopausal women. Estrogens have produced no more than equivocal results in a number of large-scale clinical trials. In a middle-aged man, obviously, estrogens in doses necessary to produce feminization probably are neither desirable nor usually acceptable. In the postmenopausal woman, perhaps estrogens may have a role as a preventive measure. They do lower beta lipoproteins, so that a mild lowering of cholesterol levels can be expected if a resumption of menstruation is acceptable.

TABLE 2

DIETARY MEASURES
TO REDUCE SERUM LIPIDS

1. Caloric restriction, 800-1,000 calories (a temporary measure).
2. Polyunsaturated fat; up to 110 Gm. of safflower, corn, cottonseed, or soybean oil per day (for a 2,500 calorie diet).
3. A low-cholesterol (100 mg/day), moderately low-fat diet (an anti-atherogenic diet).
4. Combination of diet and drugs for some patients.

DIETARY MEASURES

The dietary measures which have been advocated for the control of atherosclerosis are listed in Table 2. Caloric restriction obviously can be only temporary, for at some point a man must resume an isocaloric food intake and stop losing weight. When he does this, and if he resumes the ingestion of his habitual diet, his serum cholesterol level will rise to its previous value.

The use of polyunsaturated fat has many advocates. When used in appropriate amounts, these fats may make weight-control difficult. It has been found that one must ingest a large quantity of polyunsaturated fats before their beneficial effects become manifest. Long-term effects from the polyunsaturated-fat diet are unknown, since no human population group has used this kind of diet habitually. What happens to the cholesterol which leaves the blood after a polyunsaturated-fat feeding also remains uncertain. Studies from Ahrens' laboratory have indicated no net loss of cholesterol from the body as a result of polyunsaturated fat in the diet.[6] Movement of cholesterol into the arterial wall or into other tissues is a possibility. This question can be solved only by precise studies concerning the metabolism of cholesterol.

In my judgment, the kind of diet most appropriate for the prevention and treatment of coronary heart disease is a diet low in cholesterol and moderately low in fat (Table 3). This diet contains 100 mg. of cholesterol and 20 per cent of the total calories in the form of fat. Total protein is unchanged, but the carbohydrate content (cereal grains, fruits, and vegetables) is increased.

TABLE 3

A COMPARISON BETWEEN THE LOW-CHOLESTEROL DIET AND THE USUAL AMERICAN DIET

	Low Cholesterol Diet	Usual American Diet
Total caloric content	2,400 calories	2,400 calories
Cholesterol	100 mg.	800 mg.
Protein	75 Gm.	75 Gm.
Fat	53 Gm.	106 Gm.
Per cent of total calories	20%	40%
Carbohydrate	403 calories	285 calories

TABLE 4

CHANGES IN 96 PATIENTS WHO FOLLOWED A LOW-CHOLESTEROL DIET (mg.%)

	Before	After*	Change
Serum cholesterol	325	246	-79†
Serum phospholipids	315	246	-69†
Serum triglycerides	310	216	-94†

* Mean time of dietary adherence was two years.
† $p > 0.01$.

The results of such dietary treatment in 96 high-risk patients who were followed over a two-year period are given in Table 4.[7] Note that the decrease in serum cholesterol was 79 mg. per cent, or a 24 per cent lowering, and that the serum phospholipids and triglycerides also declined significantly despite the use of a diet relatively high in carbohydrates. In patients whose response to diet is less than optimal, drugs should be used in addition, if maximal effects are to be obtained.

CONCLUSION

In summary, dietary measures and drugs can be used effectively in individuals at high risk for coronary heart disease in an attempt to lower their serum lipid levels. I wish to stress that the treatment must be lifetime, rather than transient. Because of uncertainty regarding the toxic effects of many drugs, some agents remain experimental and have only special applications. Probably the safest, most healthful and least expensive treatment measure to use over the decades during which treatment is necessary is dietary modification, involving restrictions on foods rich in cholesterol and fat.

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Surgical Treatment of Coronary Artery Disease

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THE DEVELOPMENT of selective coronary cine-arteriography[1] and contrast demonstration of the left ventricular chamber has made possible the selection of patients who have coronary disease that can be surgically treated. It is necessary to know the location and the extent of the coronary arterial obstruction, as well as the anatomic and physiologic abnormalities of the left ventricle, before one can consider specific cardiac operations. Fortunately this information can be obtained at little risk to the patient.

Strictly speaking, there is no surgical treatment for coronary artery disease. However, there are operations that are useful in the treatment of some types of symptomatic obstructive coronary disease or its complications. At the present time there are three general types of operation: procedures designed to bring extracardiac blood to the myocardium, operations on the coronary arteries directly, and technics directed toward complications of myocardial infarction.

Surgical measures designed to supply the ventricular myocardium with extracardiac blood are now favored. Poudrage operations of various types have been done for many years, but the results have been disappointing. The internal mammary artery implant operation (Vineberg[2]) was developed many years ago but only recently has been frequently performed. In this operation the left internal mammary artery is ligated, divided, and dissected free from the chest wall. Then, with the intercostal branches bleeding, the vessel is implanted into a tunnel created in the anterior left ventricular myocardium. The vascular architecture of the myocardium prevents the formation of a hematoma. Branches of the implanted vessel form anastomoses with branches of the obstructed anterior descending artery.

In recent years Sones has shown that by selective opacification of the left internal mammary artery in the living patient, the vessel implanted in the myocardium can be made to perfuse the obstructed anterior descending artery in a retrograde manner.[3] In addition, a myocardial "stain" may appear, and the coronary veins may opacify as the contrast medium is collected. If the implantation procedure is to be helpful, the anterior descending coronary artery must be severely obstructed. Almost total or complete obstruction of this vessel must be present so that the arterial blood pressure distal to the obstruction will be low enough so that there is a significant pressure gradient between the implanted artery and the obstructed vessel distal to the obstructive lesion. If the implant is to function, the myocardium of the anterior surface of the ventricle must not be severely scarred or aneurysmal. The presence of adequate contractions in the left ventricle and the absence of congestive heart failure must be demonstrated. Finally, obstructive lesions in the circumflex and right coronary arteries should not be severe. These conditions, fortunately, are met rather frequently.

Most of the patients considered for this operation have angina pectoris. Until January, 1965, it had been performed, in the Cleveland Clinic Hospital, on 174 patients with an operative mortality of 4 per cent. In most of the patients whose progress was evaluated by arteriography from 6 to 12 months postoperatively, the implanted artery was open and there was some evidence of collateral circulation. In those patients, symptomatic improvement has been good.

Patients who have localized and severely obstructive lesions in the proximal or mid portions of the right coronary artery or in the left main coronary artery may undergo direct surgical attack on the involved vessel (Effler[3]). An endarterotomy and a venous or pericardial patch graft may be performed in the region of the obstruction. The result is a lumen diameter considerably in excess of normal. It is necessary to show that the obstructive lesion extends over a short segment of the artery and that the vessel is open distal to the obstruction, to provide a runoff for blood. The operation may be done even though there is severe

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Dr. Proudfit is a member of the staff of the Department of Cardiovascular Disease at The Cleveland Clinic Foundation. This presentation and the one by Dr. William Connor, of the U. of I., which follows it, were parts of a symposium on newer developments in the control of coronary heart disease at the 1965 IMS Annual Meeting. Two articles from the same program, by Dr. John C. Hoak, of the U. of I., and by Dr. Wm. B. Kannel, of the National Heart Institute's Framingham Study, appeared in the January, 1966, issue of this JOURNAL.

obstruction in another main coronary artery or in one of its branches. The results of the operation on the right coronary artery have been excellent. Until January, 1965, one patient had died postoperatively, and of nine studied postoperatively, eight showed patent vessels. In obstructions of the left main coronary artery, the operative risk has been higher, and more patients have shown postoperative occlusion of the vessel. However in patients who have anatomically favorable lesions, the risk of operation may still be lower than the risk of nonsurgical therapy. In some patients it is possible to do an endarterotomy and patch graft in the right coronary artery and, at a later date, an internal mammary artery implant operation, if the patient is still symptomatic and has severe anterior descending coronary artery obstruction.

Some complications of myocardial infarction can be treated surgically. Ventricular aneurysms are much more common than most people recognize. Not all of these give rise to symptoms, but emboli, congestive heart failure, and ventricular arrhythmias do occur. If these complications are encountered, the possibility of excising the aneurysm should be considered, after coronary arteriography and contrast demonstration of the left ventricular chamber. Aneurysms may involve any part of the ventricular myocardium, including the ventricular septum. Anterior and anterolateral aneurysms may be excised. Usually these aneurysms are partially filled with clot. The risk of operation is low, and the symptomatic results are good. Posterior aneurysms may be associated with mitral insufficiency secondary to papillary muscular damage. Some patients might be saved by excision of the aneurysm and application of a mitral prosthetic valve, though the risk would be high. An occasional complication of myocardial infarction is perforation of the ventricular septum. The early mortality is high in these cases, but if the patient survives for several months, repair is possible.

Further advances in the operative treatment of obstructive coronary disease are being made. Surgical therapy is not a cure, but the risk nowadays is low in suitable patients, and symptomatic improvement and probably increased life expectancy result. More general employment of surgical procedures must await widespread use of selective coronary cine-arteriography for the necessary preoperative and postoperative evaluations of the patient's circulatory status.

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Intrauterine Fetal Transfusion in Erythroblastosis Fetalis: A Case Report

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JAMES C. TAYLOR, M.D.
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WITH THE ADVENT of spectrophotometric analysis of amniotic fluid obtained by transabdominal amniocentesis, the status of the fetus of the sensitized Rh-negative mother can now be better ascertained by that means than by any previous ones.[1, 3, 5] As a result, it is now easier to choose the appropriate patients for premature, pre-term or term delivery, and thereby to improve perinatal salvage. There remains a small group of patients whose fetuses are so severely involved so early in pregnancy that premature delivery is impractical. The ultimate outcome in this group has continued to be intrauterine death, or the spontaneous onset of premature labor with delivery of a very hydropic baby. Spectrophotometric analysis will identify these babies at an early stage of pregnancy.

It is the general consensus that such babies become anemic, and after an unknown interval become edematous, possibly as a result of cardiac failure. Therefore, if the severe anemia can be avoided, hydrops can be prevented. From the marked increase in hematopoietic activity seen in such babies, it was reasonable to conclude that the anemia should be corrected by replacement of erythrocytes rather than of some substance basic to erythrocyte production.

Since intraperitoneal transfusion had been utilized successfully in small infants, it was reasoned

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that if erythrocytes could be placed in the peritoneal cavity of the fetus *in utero*, it might be possible to salvage a few more of the babies who are severely involved very early in pregnancy. An initial report by Liley[6] describing his technic and results has encouraged others[2] to attempt this form of therapy in carefully selected patients.

CASE REPORT

A 32-year-old gravida IV, para III, was first seen on January 25, 1965. Her estimated date of confinement was June 2, 1965. Her obstetric history revealed that her first pregnancy, in 1956, had ended near term with the normal spontaneous vaginal delivery of a 5 lb., 4 oz. baby who is alive and well. Her second pregnancy, in 1958 had ended at term with a normal spontaneous vaginal delivery of a term-size baby with marked hepatosplenomegaly and marked anemia. It received one exchange transfusion and died at 20 hours of life. In her third pregnancy, in 1960, a spontaneous onset of premature labor occurred at 34 weeks' gestation, and she was delivered spontaneously of a 6 lb., 15 oz. hydropic male infant. He received two exchange transfusions, and is now living, well and normal.

The past medical and surgical history of the patient's family was negative. She had never been transfused. At her initial visit the general examination was normal. Her blood type was AB Rh-negative, and the indirect Coombs' test was positive at 1:128. Her husband was type A Rh-positive, with a 13.9:0.9 probability of homozygosity. Other laboratory findings were within normal limits.

The patient was seen again on March 23, 1965, at which time there was no evidence of polyhydramnios. Fetal activity was normal, and the fetal heart rate was 140/min. Amniocentesis, performed at that visit, was productive of yellow amniotic fluid which revealed on spectrophotometric analysis that the fetus was severely anemic and possibly hydropic.

The patient was admitted to the hospital on March 27, 1965. A repeat amniocentesis was performed, and 20 ml. of Renografin 76* was injected intraamniotically. The following day she was sedated and taken to the special-procedures room in the Radiology Department. There, anteroposterior and lateral roentgenograms of the maternal abdomen revealed that the infant was not hydropic, and the fetal gut was readily outlined by the dye that the fetus had swallowed.

After careful preparation of the abdomen, a small area of the abdominal wall was anesthetized with local anesthesia, and a 0.5 cm. incision was made. A 17-gauge, 18-cm. Touhey needle was then passed through the abdominal and uterine walls and into the amniotic cavity. Aspiration revealed that the fluid flowed freely from the needle, and the needle was advanced until resistance was met. By means of the image intensifier, the needle tip was located and seemed to be at the anterior abdominal wall of the fetus. In response to gentle pressure, the needle passed into the fetal abdomen. The ease with which saline could be pushed through at that point indicated that the needle was probably in a fetal body cavity. Subsequently 3 ml. of Renografin 76 was instilled, and another roentgenogram of the maternal abdomen was taken. It revealed distribution of the dye within the fetal peritoneal cavity, and demonstrated the curvilinear outline of the diaphragm. A polyethylene tube was then passed through the needle so that a 18 to 24 cm. length of it was within the fetal peritoneal cavity. The Touhey needle was then removed.

Subsequently, over a 45-minute period, 120 ml. of packed erythrocytes from a freshly drawn unit of non-refrigerated type-O Rh-negative MM-positive blood were gently forced through the tubing. During this time, the fetal heart rate increased from 140 to 180 beats per minute. After the transfusion, the fetus was given 1 million units of aqueous penicillin intraperitoneally, and the tube was withdrawn. Within two hours, the fetal heart rate had returned to 140 beats per minute. The patient remained in the hospital for 24 hours, and was then discharged.

On April 9, 1965, the patient was readmitted to the hospital, and following essentially the same technic, a second intraperitoneal fetal transfusion was performed. This time it consisted of 150 ml. of packed erythrocytes from a freshly drawn unit of non-refrigerated type-O Rh-negative NN-positive blood.

The plan was to admit the patient for induction of labor on April 26, 1965. However at 5:30 a.m. on April 24, 1965, spontaneous rupture of the membranes occurred. She was admitted to the hospital one hour and 15 minutes later, and was appropriately prepared for labor and delivery. After a total labor of six hours and 18 minutes, and under pudendal-block anesthesia, she was delivered of a vigorous male infant weighing 2,190 Gm. The placenta weighed 475 Gm., and appeared normal.

The infant's color was good. The initial Apgar was eight, and the five-minute Apgar was 10. There was no facial or peripheral edema, and the lungs were clear. The liver was palpated 1 cm. below the costal margin, but the spleen was not palpable. Two well-healed puncture marks could be identified in the left lower quadrant of the abdomen 2 and 3 cm. from the umbilicus.

Studies of the cord blood revealed a hemoglobin level of 16.4 Gm. per cent, a hematocrit of 46 per cent, and a reticulocyte count of 0.3 per cent. No

* Diatrizoate Methylglucamine 76 per cent—E. R. Squibb & Sons.

nucleated erythrocytes were identified in the peripheral smear. The cord-blood bilirubin level was 2.8 mg. per cent. The cord blood was typed as O Rh-negative. The direct Coombs' test was negative, but the indirect Coombs' test was positive at a 1:256 dilution. The fetal hemoglobin in the cord blood was 2.5 per cent, compared to an expected normal of 55-89 per cent.[4] By differential agglutination technics it was determined that one-third of the adult hemoglobin present was from the first tranfusion, and two-thirds was from the second.

An exchange transfusion was performed at 1 hour of age, and the baby tolerated the procedure well. The indirect Coombs' test on the post-exchange sample was positive at 1:32 dilution, and the hemoglobin was 14.8 Gm. per cent.

Serum bilirubin determinations thereafter revealed a gradual rise to a peak of 15.9 mg. per cent at 76 hours. Thereafter the serum bilirubin fell. Further exchange transfusions were not indicated. Prophylactic antibiotics were given for five days after the single exchange transfusion, and standard formula feedings were begun at 36 hours of age. The baby tolerated the feedings well, but showed a gradual weight loss to 2,000 Gm. on the sixth day of life. Subsequently his weight gradually rose, and he was discharged on the 28th day, weighing 2,560 Gm. During the four-week hospitalization, a single booster transfusion of 50 ml. of packed type-O Rh-negative erythrocytes was given when the infant's hemoglobin fell to 10.3 Gm. per cent at age 24 days. The hemoglobin on the day of discharge was 12.8 Gm. per cent, and the hematocrit was 39 per cent.

DISCUSSION

Intrauterine intraperitoneal transfusion of the fetus is indicated in relatively few pregnancies in sensitized Rh-negative women, and should be attempted only when there is adequate evidence from spectrophotometric analysis of amniotic fluid, as well as from the obstetric history or from a history of maternal sensitization by transfusion, to indicate the probability of a severely involved fetus in the second or early in the third trimester.

In general, such therapy should be instituted only in non-hydropic infants and prior to the end of the 32nd or 33rd week of gestation. After that time, induction and delivery probably carry less hazard for the baby than does intrauterine intraperitoneal transfusion. Following is an example of such circumstances: The patient's first delivery had been by cesarean section for cephalopelvic disproportion. During that procedure she had received one unit of whole blood. Early in the third trimester of her second pregnancy, an indirect Coombs' test demonstrated Rh sensitization. She was referred for evaluation at 30½ weeks. Analysis of the amniotic fluid revealed a severely involved fetus. Amniography showed that the baby was severely hydropic. Because in most instances intrauterine transfusion has failed in hydropic fetuses, the patient underwent repeat cesarean section and was delivered of an extremely hydropic, moribund infant that survived only a short time. Two other such patients have been referred in the third trimester with fetuses already hydropic.

Subsequently, another patient in whom fetal transfusion had been indicated was treated at 27 weeks' gestation. After the transfusion of 42 ml. of packed erythrocytes, it became apparent that the transfusion had been intrapleural rather than intraperitoneal. As much blood as possible was withdrawn from the pleural space, and the procedure was discontinued. The fetal heart tones remained stable, but two days later, just prior to the planned repetition of the intrauterine transfusion, the patient became febrile. Examination revealed probable amnionitis. Premature labor started shortly thereafter, and the patient was delivered of a 1,035 Gm. living male, who became noticeably jaundiced within a few minutes after delivery. Because of extreme prematurity, the baby died at 35 minutes of life.

CONCLUSIONS

Our experience resembles those reported by other investigators in that attempts at intrauterine fetal transfusion are not uniformly successful. Therefore, as previously stated, it should be undertaken only in those instances in which to the best of one's knowledge there is no other hope of saving the fetus. The procedure is not a panacea, and must be reserved for babies very severely involved so early in pregnancy that an avoidance of intrauterine death or severe hydrops would necessitate delivery so early that the infant's survival would be improbable even if there were not the additional hazard of erythroblastosis. If the fetuses are to benefit from this procedure, the mothers must be seen by the middle of their second trimester, in order that amniotic fluid analyses can be done and treatment can be instituted before a hydropic change occurs.

ACKNOWLEDGMENT

We wish to thank Drs. H. W. Fischer and J. R. Thornbury, of the U. of I. Department of Radiology, and Mr. M. R. Liesch, chief technician at the University Hospital Blood Bank, for their valuable assistance, without which this procedure could not have been accomplished.

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Vascular Injuries Resulting From Trauma

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THE EFFECTS of traumatic interruption of arterial circulation at various levels were investigated during World War II, but because of the adverse conditions under which the battlefield wounds were sustained and the presence of other associated injuries, the data and results could not be regarded as reliable. Large series of arterial injuries in civilian life have also been reported, but since most of them were treated immediately, the effect of totally interrupted circulation without therapy could not be assessed from them. Considerable literature is available dealing with the inadequately-treated acute vascular injury; with the effect of collateral circulation on the distal extremity following partial interruption of the flow of blood; with the effect of compression by false aneurysms on surrounding structures; and also with the late physiologic disturbance that results when there is arteriovenous communication at the site of the injured vessels. In our study, we have reviewed a group of patients admitted to the University Hospitals with traumatic vascular injuries which were treated immediately, and also a group of patients in whom treatment was delayed.

Thirty-nine patients with major injuries to the arteries were reviewed. The common femoral artery had been injured in 10; the popliteal in eight; and the brachial artery in eight patients. The superficial femoral artery had been injured in five; the internal iliac in four; the aorta in two; and the posterior tibial and anterior tibial artery in one patient each (Table 1). Twelve additional patients with traumatic injuries of the thoracic aorta were not included in this study.

Dr. Lawrence is an associate professor and Dr. Ehrenhaft is a professor of thoracic surgery at the U. of I. College of Medicine. Dr. Neville was an assistant professor of surgery at the U. of I. when the research for this paper was done. He joined the faculty of the University of North Carolina a year ago.

TABLE 1
VESSELS INJURED

Common femoral	10
Popliteal	8
Brachial	8
Superficial femoral	5
Internal iliac	4
Aorta	2
Posterior tibial	1
Anterior tibial	1

Thirteen arterial injuries had been produced by missiles from guns. Automobile and motorcycle accidents had caused injuries in nine patients. There were nine patients with surgically-induced vascular problems. Five patients had arterial injuries produced by metals, glass or knives, and three patients had crush injuries of the blood vessels (Table 2).

Seventeen patients had had good results, and 10 patients had had satisfactory results. Nine patients had required amputation of their extremities and were classified as having had poor results. Three patients had died (Table 3). Of the nine patients who had undergone amputations, four were seen three, four, six and 15 days following injury, respectively. Various stages of gangrene had been present when they were admitted to the hospital.

The cause of death in two of the three patients

TABLE 2
ETIOLOGIES

Gunshot	13
Automobile / Motorcycle	9
Iatrogenic	9
Metal, glass, knives	5
Crushing injuries	3

TABLE 3
RESULTS

Good results	17
Satisfactory results	10
Poor results—amputation	9
Deaths	3

could not be clearly explained, but it probably had been the metabolic disturbances which are frequently seen in patients following re-implantation of the extremities. One patient had had a partial resection of his abdominal aorta—on re-exploration following a ligation to control hemorrhage four hours earlier. The second patient had had a re-implantation of the right lower extremity that had been nearly completely avulsed three hours earlier. This patient died suddenly four hours after surgery. The third patient died in the immediate postoperative period as the result of massive gastrointestinal hemorrhage.

Complete transection of the arteries was found in 17 patients (Table 4). Ten patients were seen soon after injury, and two of those 10 required amputation of the extremity. One of this group was explored, and the vessel ends could not be found. In another patient, poor immobilization of the associated fracture resulted in loss of the graft. Seven patients were seen late, and five of them required amputation of the extremity. (The two patients who did not require amputation included one who was seen at the time of repair of an inguinal hernia, 16 years after ligation of the common femoral artery, and one patient who four months earlier had had an anastomosis of the superficial femoral artery, with failure at the line of anastomosis.) Twelve patients had been classified as having contused vessels, with vascular occlusion by clot.

Eleven patients had been seen early. One patient in that group had died. One patient had been seen late, and required amputation of the lower extremity. Two patients had had partial laceration of the vessel walls, with good results after repair.

TABLE 4
TYPES OF INJURY

Complete transections	17	
Early	10	
Amputations	2	
Ligation without amputation	2	
Late	7	
Amputation	5	
Partial lacerations	2	
Good results	2	
Contused vessels—occluded by clots	12	
Early	11	
Death	1	
Late	1	
Amputation	1	

Eleven patients had been seen with false aneurysms. One of them required below-the-knee amputation due to embolization of a clot to the foot. Seven patients had been seen with arteriovenous fistula. Five of these had good results, and two were classified as having fair results. Three of the patients with false aneurysms had simple proximal and distal ligation of the vessels supplying the false aneurysm, and no amputation had been necessary following this procedure (Table 5).

TABLE 5
TYPES OF INJURY

False Aneurysm	11	
Amputation	1	(embolus)
Ligation only	3	
No amputations		
Arteriovenous fistulae	7	
Good results	5	
Fair results	2	

REPRESENTATIVE CASES

Case 1. J.C., a 23-year-old male, after being thrown from his motorcycle had multiple lacerations of the body, and a cold, cyanotic and pulseless right foot and leg. He had a one-inch laceration in the popliteal fossa and a similar laceration over the mid-third of the tibia. The injury to the popliteal artery was diagnosed, and immediate exploration of the popliteal fossa was carried out. The findings were suggestive of a posterior dislocation of the knee, and there was contusion and pulselessness in the middle third of the popliteal artery. The lumen of the popliteal artery had been obliterated by a sub-intimal clot, but the distal popliteal artery was patent. The popliteal artery was transected; the sub-intimal clot was removed; and a partial end-to-end anastomosis was done, together with an anterior venous-patch angioplasty to prevent constriction of the lumen. The patient made an uneventful recovery, and has very good circulation in his lower extremity at the present time.

Case 2. On September 22, 1955, the left lower extremity of J.S., a 36-year-old male, was pinned between a tree limb and the Caterpillar tractor which he was operating, and approximately 45 minutes elapsed before workers were able to free him from the wreckage. His doctor noticed on the second day following injury that his left foot was cold and mottled, that he had severe rest pain. Approximately 20 cc. of bloody fluid was aspirated from the knee joint.

Three days after the accident, the patient was transferred to the University Hospitals, where his

foot was paretic, cold and mottled, and no pulses were present below the superficial femoral artery. Arteriograms showed complete disruption of the popliteal artery (Figure 1). At the time of surgery there was complete separation of the popliteal artery, and the ends had become plugged with clots. The popliteal artery was reconstructed. Fasciotomy on the calf and a left lumbar sympathectomy were done. Five days later, supracondylar amputation of the left leg had to be performed.

Case 3. In 1957, A.W., a 68-year-old female, had undergone an open-surgical procedure as a consequence of a fracture of her right hip. Except for a three-inch shortening of her right leg, her recovery had been satisfactory until April, 1961, when she presented findings of early cardiac decompensation. A diagnosis of arteriovenous fistula of the right femoral artery was confirmed by an arteriogram (Figure 2), and on May 19, 1961, the arteriovenous fistula was resected and arterial continuity was re-established by an end-to-end anastomosis of the artery. The patient's postoperative progress was satisfactory, and when seen three months later for treatment of a common-duct stone, her cardiovascular system was normal.

Figure 1. Femoral arteriograms showing disruption of the popliteal artery.

It was thought that an arteriovenous fistula had been produced during the surgical procedure for fixation of her right hip.

DISCUSSION

Trauma to an artery may result in partial laceration of the circumference; complete severance of the artery; and/or contusion, with sub-intimal hemorrhage and perforation, and the establishment of a fistula between the artery and the accompanying vein (Figure 3). These injuries can have various results. There may be immediate loss of life; a threat of amputation; or changes in circulatory physiology which may affect the heart and cardiovascular system secondarily, and also reduce the function of the affected extremity. Severe blood loss may occur during partial disruption of blood vessels because remnants of intact vessel wall prevent complete retraction and obliteration of the vessel ends, and thus permit further bleeding. If this type of injury occurs in an area where the surrounding soft tissue prevents massive loss of blood, hemorrhage may be tamponaded and a false aneurysm can develop. The aneurysms increase in size and produce clinical findings of compression on surrounding structures, or they may extend into the subcutaneous tissue, become infected and rupture. Later surgical reconstruction is possible if ample time has passed so that collateral circulation has developed.

In patients who have adequate collateral circulation but in whom local findings prevent safe surgical reconstruction, ligation of the vessels supplying the false aneurysm, with or without sympathectomy, can sometimes keep an extremity viable. If complete transection of the vessel has occurred, the blood loss may have been severe initially, but with the consequent drop in blood pressure, formation of a clot and retraction of the severed vessel ends, the vessel becomes completely occluded and blood loss ceases. In this type of injury, the threat of loss of the limb is grave, and early reconstructive surgery is mandatory.

A contused artery and sub-intimal hemorrhage extensive enough to obliterate the lumen completely present a threat similar to that posed by complete arterial severance, and immediate reconstruction is imperative in those cases, too. If a large artery and its adjacent vein have been perforated, an arteriovenous fistula develops which produces hemodynamic disturbances leading ultimately to cardiac decompensation as well as ischemic changes in the distal extremity. Dr. deTakats has referred to the condition of arterial stupor, wherein, in addition to a vasomotor reflex, there is a myogenic contraction of the injured vessels, especially around fractures or dislocations near the elbow or knee, and without direct injury to the artery itself. If this is a reflex type of arteriospasm, a paravertebral block will abolish it. If there is no return of arterial flow, only direct

surgical exposure can verify the presence of a myogenic spasm or definite occlusive arterial injury.

If there is an open wound, the diagnosis of injury to a blood vessel is quite obvious. Hemorrhage from the bleeding vessel should be controlled by meticulous occlusion of the proximal and distal ends. It is necessary to suture the lacerated ends, and do an end-to-end anastomosis or reconstruction with a vein graft or even prosthetic material, if there is no threat from gross contamination.

In a closed wound where there is no visible bleeding, diagnostic acumen and initiative are essential. If there is partial laceration of an artery, with the escape of massive amounts of blood, immediate exploration of the affected vessel should be carried out. If there is a complete occlusion or complete severance of an artery, as is seen frequently in traumatic posterior dislocation of the knee joint, angiographic studies and immediate exploration of the wound are also imperative.

The presence of a pulse in an artery distal to the site of injury may frequently be noted in patients with false aneurysm and also with arteriovenous fistula. This is probably the reason why many patients with this type of injury are not treated in the emergency period. A thrill, a continuous murmur, and an expanding pulsating mass are findings suggestive of an arteriovenous fistula. Arteriographic demonstration of these findings makes the diagnosis quite evident. The procedure of choice, after resection of a false aneurysm or arteriovenous fistula, is restoration of arterial continuity by means of an end-to-end anastomosis, or substitution, using a vein or artery graft or a prosthetic conduit. Sympathetic blocks and sympathectomy should be used only when a spastic

Figure 2. Translumbar aortogram demonstrating arteriovenous fistula of the femoral artery and vein.

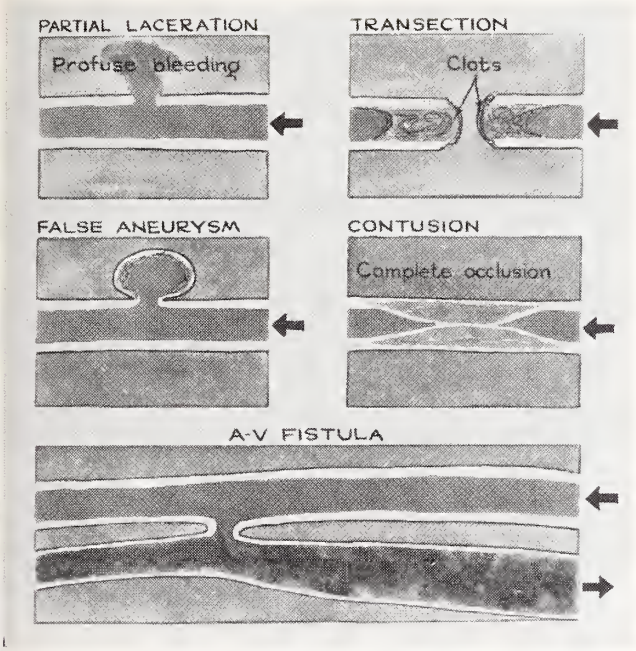

Figure 3. Types of blood-vessel injuries incurred from trauma.

arterial component is suspected, or when reconstructive procedures are likely to fail. These procedures are necessary to the development of a collateral circulation. Fasciotomies may be used to relieve edema and muscle necrosis in a closed compartment, but in our experience they have not resulted in restoration of circulation to an extremity. The incidence of secondary infections following fasciotomies has been quite high.

SUMMARY

1. Injuries to the arteries may consist of partial laceration, complete severance, a contusion producing complete occlusion, false aneurysms and arteriovenous fistulas.

2. Injuries resulting in partial or complete severance and occlusion by sub-intimal hemorrhage require immediate restoration of the circulation if the affected extremity or sometimes even the patient's life is to be saved.

3. Closed injuries without visible loss of blood can be deceptive, and all technics, including arteriography, should be used in determining whether there is a definite vascular injury.

4. Arteriovenous fistulas and false aneurysms do not necessarily endanger the viability of a limb, but they do require correction, since they can result in a severe disturbance in cardiac function and in cardiac failure.

5. Interruption of the sympathetic nerve supply to the affected extremity should be considered merely as an adjunctive procedure, and should not be regarded as definitive treatment for arterial injuries.

6. In our hands, fasciotomies have been useless in the treatment of arterial wounds of the extremities.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 455

RAYMOND F. SHEETS, M.D., chairman,
CPC Committee
SALLY R. OSBORNE, secretary

SUMMARY OF CLINICAL FINDINGS

A 54-YEAR-OLD WHITE MAN was admitted to University Hospitals in mid-March. His chief complaint, of shortness of breath on exertion, had begun insidiously about two months earlier. His health had been excellent until the onset of that symptom, except for one bout with pneumonia six years before his admission. He had smoked heavily for many years, and he said that he also had drunk more than two bottles of whiskey per day for many years, until the onset of his present illness.

His shortness of breath was unaccompanied by cough or edema, but it had become progressively worse, and he had been admitted to another hospital six days before he came here. He denied orthopnea, paroxysmal nocturnal dyspnea and anginal pain, and he gave no history of myocardial infarction. At his local hospital his treatment had consisted of digitalis, Vistaril and quinidine, but there had been no improvement, and he had continued to have shortness of breath and had begun to have episodes of nocturnal dyspnea and orthopnea.

He was admitted to University Hospitals because of his progressive dyspnea. This mildly obese man was in no distress at rest, but he became very dyspneic after slight exertion. Careful questioning revealed no history of chest pain, cough or hemoptysis. There was no history of rheumatic fever or cardiac murmurs. His blood pressure was 130/85 mm. Hg, and his pulse was 90/min. and regular. There were no vascular spiders on his skin. His eyes, ears, nose and throat were normal. Initially

his neck veins did not appear distended. His thyroid gland was not palpable. Examination of his chest revealed a mild increase in the antero-posterior diameter and a few crepitant rales at both lung bases. There was cardiomegaly, and the heart sounds were distant. The aortic second sound was louder than the pulmonic second sound. No murmurs were heard. The abdomen was moderately distended, and there was questionable ascites. The liver was enlarged and could be felt about three fingerbreadths below the costal margin. There was slight tenderness in the right upper quadrant of the abdomen. There was a reducible right inguinal hernia. All peripheral pulses were palpable, there was no calf tenderness, and Homan's sign was negative. The neurologic examination was normal.

The initial laboratory studies revealed a hemoglobin of 14.7 Gm. per cent, a hematocrit of 47 per cent, a white blood cell count of 9,650/cu. mm., and a normal differential. Urinalysis demonstrated 2 + proteinuria and many hyaline casts. The BUN was 23, and the creatinine was 1.6 mg./100 ml. The serum sodium was 130, the CO_2 was 15.2, the potassium was 5.0, and the chloride was 101 mEq./L. The serum albumin was 3.0, and the serum globulin was 3.6 Gm. per cent. The serum cholesterol was 168 mg./100 ml., and the BSP retention was 8 per cent. The SGOT was 42 units. The serum bilirubin was normal. Initial chest x-ray showed marked and diffuse cardiac enlargement. The electrocardiogram revealed only nonspecific RST- and T-wave changes.

During the patient's first three days in the hospital, there was little change in his condition. On the fourth hospital day, he became more dyspneic, and developed a rectal temperature of 102.6°F. The electrocardiogram then showed a first degree A-V block and occasional bigeminy due to ventricular premature beats. The digitalis was therefore discontinued. Although dyspneic, he was not orthopneic, and pulmonary function studies done on his fifth hospital day showed only minor abnormalities. There still was neither chest pain nor edema. The neck veins were distended, however, and the venous pressure was 20 cm. H_2O. On the sixth hospital day his temperature rose to 103°F., and he had increasing respiratory distress, with many rales and rhonchi throughout the chest, especially on the right side.

On the seventh hospital day, the patient began to get worse. He became cyanotic and hypotensive, and his systolic blood pressure fell, at one time, to 70 mm. Hg. Venous pressure was 32 cm. H_2O. He became oliguric and acidotic, his urinary pH being 7.29. Cardiac fluoroscopy was done, and the heart was seen to be grossly enlarged, with barely perceptible pulsations. A pericardial tap was attempted, but only 2 cc. of blood-tinged fluid was obtained. The electrocardiogram still showed first degree A-V block, and the voltages were normal.

On the eighth hospital day the patient became confused and developed abdominal distention. Through a nasogastric tube, 800 cc. of gastric fluid was obtained. Bowel sounds were present, but abdominal roentgenograms suggested paralytic ileus or partial small-bowel obstruction. An abdominal paracentesis was carried out in the right lower quadrant, and 20 cc. of serous, blood-tinged fluid was obtained. The patient continued to have a fever and was dehydrated. His systolic blood pressure, however, remained stable around 100 mm. Hg. Total urine output on the eighth hospital day was 225 cc.

On the ninth hospital day, he again became hypotensive, and it was difficult to maintain the blood pressure, even with Levophed. He was extremely cyanotic, and his neck veins were greatly distended. A phlebotomy of 500 cc. lowered his venous pressure to 22 cm. H_2O.

He was transferred to the Intensive Care Ward nine days after his admission. Soon afterward he had a cardiac arrest necessitating the use of a cardiac pacemaker. A little later, his respirations ceased and he died.

CLINICAL DISCUSSION

Dr. Joseph D. Brown, Internal Medicine: CPC No. 455 concerns a 54-year-old man who was admitted to this hospital last March. Mr. Ray Miller will discuss the case for the students.

Mr. R. Miller, junior ward clerk: The patient was a chronic alcoholic with shortness of breath of about two months' duration. We believe that two major organ systems were involved in his disease. Physical examination and laboratory data indicate that he had a liver difficulty—probably Laennec's cirrhosis. That he also had cardiac disease was manifested by his cardiomegaly and pulmonary edema. We believe that he died as a result of congestive failure caused by a primary cardiac disease.

The causes for congestive heart failure can be separated into the categories of congenital lesions, failure secondary to other organic disease, and acquired cardiac disease. Since the patient gave no evidence of a congenital lesion, we next consider failure due to other organic disease. Under this heading we look for evidence of lung disease or pulmonary vascular disease, but the pulmonary function studies in this patient were only slightly abnormal. Cirrhosis is also a possibility, but it usually causes a high-output failure, something which this patient did not demonstrate, and there is usually no gross cardiomegaly in patients who have it.

We then turn to acquired cardiac disease as a cause for his failure, and there are several causes for that condition. Trauma is one possible cause, but this patient had experienced nothing of that sort. An inflammatory cardiac disease such as pericarditis, myocarditis or hypersensitivity reaction is another possibility, but there were no systemic manifestations of inflammatory disease; there was no pain or friction rub; and there was no pericardial effusion on his pericardial tap.

Neoplasms also can cause congestive heart

failure, but only very rarely. There is a chance of a gastrointestinal or lung tumor with pericardial metastases, but this is a very remote possibility. Degenerative cardiac disease can also result in congestive failure, but in this patient there was no evidence of ischemic heart disease with angina, or of a previous myocardial infarction or of significant EKG changes. There is a chance, however, of beri-beri heart disease due to a thiamine deficiency, for such a condition can occur in a chronic alcoholic. It is usually a high-output failure, and there is usually an associated polyneuritis that this patient did not demonstrate.

Another cause of acquired heart disease would be chemical or toxic cardiomyopathy, such as is produced by alcohol or drugs. We feel that alcoholic cardiomyopathy should be considered in this patient. In such a disease, one finds a history of alcoholism with no gross malnutrition; no history of an initial inflammatory disease; a large, dilated and hypertrophied heart with decreased intensity of the heart sounds; and little, if any, response to digitalis therapy. Usually the myocardiopathy starts with left-sided heart failure and progresses to right-sided failure. Then the latter predominates during the disease.

Since all of the above findings can be demonstrated in this patient, our differential diagnosis would include an alcoholic myocardiopathy as the primary diagnosis. One must rule out chronic congestive pericarditis, although in that disease the heart is usually not enlarged, and there usually is a calcified pericardium. We also must rule out infiltrative myocardiopathy such as amyloidosis or hemachromatosis which gives symptoms similar to the alcoholic myocardiopathy. A chronic myocarditis must also be ruled out, for its symptoms mimic those of a myocardiopathy. In the July, 1965, issue of the CANADIAN JOURNAL OF MEDICINE, there were reports of three cases of alcoholic myocardiopathy which closely resembled that of the patient whom we are considering today.

The paralytic ileus, we feel, can be explained by the fact that this patient was severely debilitated and in a terminal state, and had vascular insufficiency. But a mesenteric thrombosis or hypokalemia due to prolonged intravenous therapy must be ruled out. We feel that the rhonchi and fever which developed were probably caused by pneumonia resulting from poor lung ventilation and pulmonary edema in a debilitated patient. However we must rule out pulmonary emboli.

In conclusion, then, our diagnosis is that death was caused by congestive heart failure due to an alcoholic cardiomyopathy, and we also believe that this patient demonstrated Laennec's cirrhosis and pneumonia.

Dr. Brown: Dr. Bean will discuss the case for the staff.

Dr. William B. Bean, Internal Medicine: After the barrage that Mr. Miller and his co-conspirators have laid before you, it seems that my task is going to be one of supererogation.

I think I need not go over the protocol in detail. If, as is alleged, the patient had drunk two bottles of whiskey daily for a long time, he had either a certain amount of bravado (which is not rare among alcoholics), or a conspicuous capacity—one that he was able to sustain with relatively meager ill effects. His Bromsulphalein was found to show only 8 per cent retention, a level which might easily have been occasioned by his missing all meals for one day. Furthermore, although his A/G ratio was reversed, it was not reversed very far. He did not have a very low albumin, and he did not have a very high globulin. Therefore, although I think it possible that he had cirrhosis, the evidence for cirrhosis is less convincing than one might wish it were. The other clinical correlates that we look for—gynecomastia, palmar erythema and spiders—were not noted. I should emphasize that one of the three is found in only about 75 per cent of people with established cirrhosis, and all three may occur quite independently of it. In and of themselves, these largely negative findings do not exclude cirrhosis, but they put the weight of evidence against it.

This man had been sick for only about two months, and his symptoms had consisted merely of shortness of breath. He had experienced no orthopnea, no paroxysmal dyspnea at night, no pain in the chest and no peripheral edema. The absence of abdominal swelling makes me think that ascites was not giving rise to his difficulty. Within a period of a little over 10 weeks from the appearance of his first symptom, the man was dead. This fact indicates a very rapidly progressing process, and it is certain that within about the last two weeks of his life, after he had been admitted to two different hospitals, he went into a very precipitous decline and died of arrhythmia in profound congestive failure, and I think primarily he died of congestive failure.

As Mr. Miller has told you, the pertinent question is "What can cause cardiomyopathy, or what kinds of things cause heart-muscle failure?" There are plenty of diseases that we recognize as causing heart failure. Three of them are responsible in about 90-95 per cent of the cases. They are coronary-artery disease with or without myocardial infarction; valve disease, whether congenital or acquired; and hypertension. Then there is another very, very eclectic and diverse collection of diseases in which the heart muscle fails. These conditions can be grouped into a variety of categories, and the only thing in the whole protocol about which I feel quite certain is the few I can exclude. I think we need not worry about postpartum heart failure in this particular instance. Similarly, I think we can overlook the postmenopausal cardiomyopathy associated with muscular dystrophy. Then I think it is quite clear from the patient's history that he did not have any of a number of diseases of which congestive heart failure is a complication or sometimes the only distinctive feature. He did not have myasthenia gravis, which

can be associated with heart failure. He did not have any of the recognized muscular dystrophies. The possibility that he may have had hemachromatosis seems quite unlikely, for such liver disease as he had can fairly be attributed to his alcohol intake. Beri-beri can be ruled out, for the classical description of that disease includes high-output failure, a tremendous bounding pulse, fever and a metabolic rate higher than it should be. One is supposed to hear a pistol shot, and to see Duroziez's signs and various signs over blood vessels. These were not described in this man. Furthermore, when he first entered this hospital, he was in only mild congestive failure. His heart was not described as being enlarged, he did not have an elevated venous pressure, and his blood pressure was about 130/85 mm. Hg. Thus he had neither a high pulse pressure nor any indication of hypertension. Not knowing what his blood pressure had been, we can't say that he wasn't showing *hypo*tension from a previous state of *hyper*tension, but since there is nothing in his history to suggest anything of that sort, it would be foolhardy for us to put any weight upon that possibility.

The cluster of rare diseases called collagenoses includes polyarteritis nodosa, in which the coronary arteries may be involved; scleroderma, less often involving the heart; and disseminated lupus, with its verrucous endocarditis, which seems unlikely. There are a variety of endocardial and myocardial fibroses and fibroelastoses. The rigidity of the myocardium was the same as one sees in a tightening of the pericardium from pericardial constriction. The heart cannot dilate under those circumstances, and one has the pattern of chronic inflow stasis. This condition is characterized by high venous pressure, greatly enlarged liver, and a small pulse pressure with a tendency toward a low systolic blood pressure.

What things can suddenly put the heart out of business? We have to agree that although the disease which killed the patient might have existed for 2½ months, the lack of symptoms suggests that it had lasted no longer than that. The myocardiopathies such as muscle disease and fibrosis of the myocardium, sclerosis, endocardial fibroelastosis or pericardial disease are generally characterized by chronicity. They usually persist for many months. Pick's disease or Pick's syndrome, with its plastic proliferative changes in the peritoneum, particularly a coating of the liver, reflects chronicity. A toxic myocarditis might produce a very quick effect, but we do not recognize many such cases clinically. With the exception of alcohol, no toxin has been identified in this man's history. Such diseases as sarcoidosis can directly involve the myocardium. Syphilitic myocarditis, which might produce this kind of trouble, usually has a course measured in months. The patient suffers from chronic congestive heart failure perhaps for a year, and then finally dies of it. Coronary-artery disease with multiple miliary myocardial infarcts that coalesce, perhaps diffusely, can produce fibrosis without producing diagnosable electrocardiographic changes. Again, in such circumstances, congestive failure is usually spread over a longer period. Metabolic disorders such as hemachromatosis are characterized by chronicity.

Where one is dealing with a rare and incompletely understood disease of the myocardium, one must remember extremely obscure things such as primary tumors of the myocardium, metastatic tumors to the myocardium or pericardium, or an encroachment on the heart by an adjacent tumor. They may produce a variety of bizarre and sometimes quite bewildering clinical findings. I see nothing in this man to make one suspicious of an endocardial tumor. There, particularly in myxomas of the left atrium and left auricle, the common mistake in diagnosis is with mitral stenosis. But this man had no murmurs, and their absence is characteristic of heart-muscle failure as compared with valve disease.

Although congestive failure is relatively uncommon in bacterial endocarditis, there is nothing here to point very strongly to that possibility. The arrhythmias and the electrocardiographic changes were largely nonspecific. Characteristically, most varieties of heart-muscle failure do not respond well or promptly to treatment. The congestive failures in which we do get response are those caused by valve lesions, notably mitral disease. Treatment is usually less effective in various kinds of aortic valve disease. We often get good response in hypertension, particularly if the hypertension is treated too. But even if we don't lower the blood pressure, such measures as effective digitalization, restriction of salt, etc. may produce a very effective clinical improvement, though sometimes a temporary one. In coronary heart disease, also, one usually gets improvement in congestive failure through the use of ordinary therapeutic measures. Thus we know that this was not a bizarre variety of a common heart disease, but rather was some quite unusual kind of disease.

If the clinical pattern in our patient had evolved over a period of a year, or even six months, I should have been inclined to say that he had amyloidosis. Amyloidosis is not a disease in which the clinical pattern is marked by a well defined set of signs and symptoms, and we frequently overlook it, particularly when it is primary. Glycogen storage disease, again, is a chronic disease. It produces trouble over a long period of time. The evolution of that disease is unlike what sometimes occurs when multiple emboli lodge in the lungs and produce what is initially right-ventricular failure. Occasionally, a severe degree of cor pulmonale has been mistaken for myocarditis. Though the right-ventricular failure occurred first, at the time when the patient was seen, generalized congestive failure—pulmonary edema plus high venous pressure and all of its consequences in the systemic circulation—were characteristic of the trouble which was seen.

At this time it might be well for us to take a

look at the x-rays, to see whether there is any further clue that we can use.

Dr. Steven H. Cornell, Radiology: The first chest film which was taken at this hospital showed that the heart was quite large. There was congestion of the pulmonary vasculature, and there were a few B lines of Kerley at the bases that were indicative of venous and lymphatic congestion. That appearance does not suggest pericardial effusion, particularly, but pericardial effusion was something that could not be ruled out.

The lateral view taken on the same day showed that the heart was enlarged both anteriorly and posteriorly. There was some fluid in the pleural space, in the posterior gutter. Films taken between March 12 and 18 showed little change. There was no evidence of pneumonia up to that time. On the 19th, the patient was quite sick, and since this film was taken with a portable machine, with the patient lying on his back, we really don't see things very well. About the only thing we can say is that the heart was still very large, and that there was fluid which had migrated up to the apex more on the left side than on the right. From this film, we could not exclude an underlying pneumonitis.

On the same day, films of the abdomen were obtained. This is an upright film which showed some distended loops of bowel with air-fluid levels. The supine film of the abdomen showed a few gas-filled distended loops of small bowel, but there was gas in the ascending colon and all the way around to the descending colon, and there was considerable gas in the rectum. These findings would not be consistent with a small-bowel obstruction, but could be consistent with a mild paralytic ileus.

Dr. Bean: Do you think you can reasonably exclude pulmonary emboli as a possible cause of the patient's trouble?

Dr. Cornell: No, I don't think we can exclude pulmonary emboli.

Dr. Bean: X-ray and clinical findings in this man suggest a "water bottle" heart. The heart, sitting on top of the diaphragm, had the contour of a bag of water, bulging out at the place where it was not supported by the diaphragm. Differentiation between flabby myocardium and pericardial effusion is difficult. If the patient had been well enough to be put in the head-down position for an x-ray, conspicuous displacement of the shadow, with the base of the heart quite wide, would have suggested—but, again, would not have established—pericardial effusion.

As for acute pericarditis, this man had a fever, he did not have a friction rub, and he did not have murmurs. The fact that the insertion of a needle resulted in the withdrawal of only a couple of cubic centimeters of blood-tinged fluid doesn't permit us to exclude the possibility of pericardial effusion. It makes it seem considerably less likely, but it doesn't exclude it.

As I "come down the home stretch," I might read a list of all the kinds of primary cardiomyopathy, including about 170 different varieties, but to do so would be to show spurious and second-hand erudition, and would do nothing to clarify this patient's problem. I should like to make a case, not for pericardial disease (though I think we cannot rule it out), not for any of the producers of chronic congestive failure (of which amyloidosis is the typical example), but to suggest the possibility that this man had an inflammatory myocardial lesion—that he might have had myocarditis.

Myocarditis of an inflammatory kind can be produced by a great many different things. When I was working with Dr. Blankenhorn, in Cincinnati, he blamed mysterious congestive failures on myocardosis. A favorite "catchbasket" in those days was Fiedler's myocardosis. It was an isolated inflammation with no accompanying signs of systemic infection. It was about as pure a culture as one could get of a primary heart-muscle failure. In Baltimore 30 years ago, for reasons that were quite obscure to me, this general sort of trouble was called "syphilitic myocarditis," despite the fact that many of the people who died from it had no indication whatsoever of syphilis. An occasional patient did have demonstrable syphilis in the myocardium—not gummatous myocarditis, which may destroy normal heart structure and interfere with function in a variety of ways, but a diffuse inflammatory process giving a rather nondescriptive picture of inflammation. Spirochetes were not identified in the myocardium.

Today, when we think of myocarditis we tend to think of viral diseases—Coxsackie in particular, but there are a great many of them. It may occur after diphtheria, where it is a toxic rather than a primary inflammatory or infectious variety. There are a number of other causes. It has been described in chicken pox, measles, and most of the common viral diseases.

We have no indication that this man recently had had any of the recognized exanthems which are much more prevalent in children than in adults. The features in his disease that were consistent with it were the fairly rapid course and the very rapid terminal phase, the flabby and dilated myocardium, the nondescript electrocardiographic changes, the intractable congestive failure—though such findings in no way put more emphasis upon, or lead more directly to, one kind of cardiomyopathy than to another—and the arrhythmias, one of which ended his life—either ventricular fibrillation or cardiac asystole. Despite the fact that all the skills and all the equipment of the Intensive Care Unit were used to avoid just such an accident, one of them terminated his life. The combination of failure of respiration and failure of cardiac activity presented a problem which even heroic measures could not overcome.

I think it highly unlikely that this man had a tumor. I do not think it impossible that he had any of the variety of cardiomyopathies that I have

mentioned. But if he did, his course, and particularly the terminal phase of it, progressed at a much more rapid rate than one commonly sees clinically.

When we confront a problem in a patient like this, we have to go through some such series of mental gymnastics as I have traced for you. But from a practical point of view, what do we need to know of a person like this? We need to know that he is in congestive failure. Knowing that, we treat him for congestive failure and we get nowhere. He does not respond. Thus we are led to believe that he had an intractable variety of congestive failure, indicating a bad prognosis and the likelihood that his is one of the rarer forms of the disease.

From the academic point of view, it would be nice to land on the right diagnosis. From the point of view of the proper practice of medicine, the thing to do is to recognize the exact cause. I do not believe it can be recognized with any assurance from the protocol. I should not be surprised if this man turned out to have had one of the conditions which I thought unlikely because they are rare. But in medicine it is much better to make a decision which will form the basis for a course of action, even though one hasn't gathered all of the facts and doesn't know precisely what the disease is. In this instance, it is the melancholy truth that knowing what to do did not do the patient any good. All that one can do, in a clinical problem like this, is to evaluate the findings in a systematic fashion, and to do the things which we know give the patient the best chance of improving. So many times, in medicine, one has to proceed and act without having many of the essential particulars. We take action even if taking action consists of doing nothing. At least we follow a logical plan. That is the important lesson to be learned from a problem like this.

I am sure Dr. Korns will have some very interesting material to spread before us. In any event, Mr. Miller and I will not have been exactly right.

Dr. Michael E. Korns, Pathology: I think we shall see that neither Dr. Bean nor Mr. Miller had much to worry about.

At autopsy, the most conspicuous abnormality was the greatly enlarged heart. It weighed 630 Gm. The enlargement was symmetrical and biventricular, and there was relatively little dilatation. The atria were not dilated. The myocardium was firm and reddish-tan. The coronary arteries showed very little arteriosclerosis, and there were no valve lesions. Although the myocardium was grossly normal, there were some significant microscopic changes, as we shall see in a few minutes. Death was caused by congestive heart failure, two manifestations of which were bilateral pleural effusion and pericardial effusion. The pericardial fluid was blood-tinged, perhaps because a pericardial tap had been attempted. There was a little ascites. Most of the viscera showed severe stasis, mostly acute, as we shall see. There was no cirrhosis, and there was no pneumonia.

Our final diagnosis was alcoholic cardiomyopathy. The diagnosis was made by exclusion, and I think that without further ado, we shall look at the first slide. This section of the myocardium is stained with H and E, and is representative. There are no areas of acute necrosis, and there is no evidence of myocarditis. Many of the fibers show sarcolysis and fibrosis. There is also interstitial fibrosis, as well as some interstitial edema. The next slide shows the most conspicuous histologic finding of which there was no hint grossly. You are looking at a fat stain of the myocardium, and the fibers have been cut in cross-section. All of the little orange droplets are fat. I emphasize that the fat is within the fibers. The next slide is a higher magnification of a different field, to show you how extensive it was. This is not an isolated field. The myocardium of both ventricles showed this degree of fatty degeneration. It was really quite severe. The next section is stained with trichrome, and shows a relatively normal fiber with a large nucleus. Another nucleus is greatly enlarged and rectangular. This finding is very common in myocardial hypertrophy, regardless of the cause. Also, it may be found at the edges of scars in hearts that are not hypertrophied. Here is what is left of one fiber; all that remains is the sheath. The nucleus apparently is gone, and the cytoplasm shows granular degenerative change.

The next slide is a section of the liver. As I said, there was no cirrhosis. This representative section was chosen to show you that there was relatively little fatty metamorphosis. The most conspicuous alteration was the acute centrolobular hemorrhage.

This section of the thyroid gland shows hyperplasia, which was interesting inasmuch as the thyroid was normal grossly. Notice the papillary folds of hyperplastic epithelium. There was no malignancy. The hyperplasia of the thyroid gland brought up one of many questions. I wondered whether the patient had hyperthyroidism, and if so, whether it might have been the cause for his cardiac difficulty. But there is a very poor correlation between the structure of the thyroid gland and its function. In the alcoholics who come to autopsy, it is not uncommon to find that those who have full-blown cirrhosis often have remarkably little coronary arteriosclerosis, but I don't know what one should infer from that. This man had a fair degree of atherosclerosis elsewhere.

In summary, these are the principal necropsy abnormalities. I should emphasize again that the diagnosis of alcoholic cardiomyopathy was made by exclusion. The histologic features of alcoholic cardiomyopathy are nonspecific. *Some* of them would fit with a diagnosis of beri-beri heart disease, or with the other primary cardiomyopathies which one has to consider.

Dr. Brown: Thank you, Dr. Korns. This is a very interesting case. Dr. Bean, this patient was

an alcoholic of the worst sort. We have outside confirmation of that fact. Of course we do not understand why this man did not have cirrhosis.

Dr. Bean: We'd like to know what his liver was made of!

Dr. Brown: That's right; we certainly should! We do not know whether the fatty infiltration in his myocardium—the replacement of the muscle fibers with fat—was related to the alcohol or not. There are many questions that could arise at this point. I'm going to ask Dr. Whalen, from the Department of Physiology, to give use some thoughts about myocardial metabolism, and to tell us what he thinks about this fat in the myocardium.

Dr. William J. Whalen, Physiology: One thing that seems rather clear is that there was a primary failure of the muscle. There are a few things that have occurred in the last few years in research laboratories that have not yet reached the textbooks, and I think I should review them very briefly. Just possibly they may apply to this case.

I am going to draw a sarcomere on the board, and we shall assume that it is a sarcomere near the outer border of the heart cell. From this membrane, the Z membrane, arise actin fibers, and in the middle lie myosin fibers. These, somewhat incidentally, have bridges on them. Along the Z membrane, seemingly connected with the outside by a pore, lie the sarcoplasmic reticulum tubules. From a number of research efforts it is fairly clear that contraction results from the release of calcium from the sarcoplasmic (or endoplasmic) reticulum. Presumably, though the evidence is not altogether clear, calcium activates the ATP-ase on these branches of the myosin. The ATP-ase then splits ATP, and somehow these fibers slide together. This is a contraction. The contraction requires energy; the rebinding of the calcium requires energy. Interestingly—and here is where these discoveries may apply to this case—one worker, Hibbs, noted that the first sign of degeneration in alcoholic myocardiopathy occurred along the sarcoplasmic reticulum, along the Z line, and that sometimes, in fact, the reticulum was vesiculated and swollen. If this is true, one doesn't have to see much damage in the fiber, provided that calcium hasn't been properly released, to find a severe reduction in the contractile force. Nor, as I see it, need this reduction be accompanied by pain.

Of course other workers have shown that alcohol increases the permeability of the cell membrane too, and although this may be the primary path of destruction—i.e., the sarcoplasmic reticulum—there is the possibility that with an infiltration of fat inside the fiber, the filaments are spread apart. With the wider separation between these junctions, the normal reactions would not occur. We don't have electron microscope pictures, however, so we can't tell whether the fat was in those spaces.

Dr. Bean: Do you have any idea whether this toxic effect is specific for alcohol and the enzymes that govern or measure this activity, or whether it may be based upon a deficiency of something in the alcoholic?

Dr. Whalen: In this connection, there is only a little evidence that I know of. The infusion of alcohol in dogs actually increases the oxygen consumption, so at least an immediate effect doesn't seem likely. In a dog, incidentally, it increases the uptake of triglycerides and decreases the uptake of fatty acid, which is a normal metabolite, as Bing showed some years ago. So it deranges the metabolism in some way, it's true; but it would also seem to uncouple it, if it increases the oxygen consumption.

Audience: How does the inefficiency of digitalis fit into this picture?

Dr. Whalen: I'm not quite so sure about that as I was about the mechanisms, but I'm quite certain that digitalis acts by increasing the mobility of calcium inside the cell. If one already has a defective mechanism for releasing calcium, presumably digitalis will not improve it. I was just speculating about the possible effects of increasing the blood level of calcium in this man. No one measured the calcium, as far as I know. In the literature that I have seen, people were interested in magnesium, potassium and sodium. Perhaps I'm prejudiced about the role of calcium, but the facts are there.

Dr. Frederic W. Stamler, Pathology: I assume that this man wasn't continuing to receive his two fifths per day of whiskey while he was in the hospital. Could any of his complications have been due to alcohol withdrawal?

Dr. Bean: He is said to have stopped drinking two months before he entered the first hospital, or 10 weeks before he died. I think that statement reflects the truth. When he began experiencing shortness of breath, he stopped drinking.

It seems to me that his ailment must have been a metabolic difficulty which may have had some analogies with deficiency diseases. His condition was not unlike what we see in classical beri-beri, with warm skin, bounding pulse, high pulse pressure, very very fast circulation, short circulation time, and all of the murmurs and noises that you hear over vessels in which blood is flowing very fast and very turbulently. There was no peripheral neuropathy. There need not have been any, but it would have helped us in this situation. I think it is quite remarkable that this man did not have liver disease. He must have made a wise selection of either parents or grandparents in order to have an extraordinarily strong fabric for his liver, or he must have known some secret.

I just saw a report from a spy who was sent out to discover this man's actual consumption. Indeed, he stopped at the liquor store when he went to work every morning, and bought two bottles there, but in addition he regularly stopped two or three times a day to refresh himself at his local pub. The two bottles were just to take the edge off his need in the evening. Apparently he had a

gargantuan appetite for alcohol, and although perhaps it "did him in," it achieved that result in a very obscure way.

Were there any changes in the T-waves of the electrocardiogram? British workers reporting on 20 cases of alcoholic cardiomyopathy have described a T-wave with a notch, nick or slash in it. They found it in 17 of their 20 patients, and many of those people had no evident cirrhosis. Our patient's electrocardiogram was quite unlike either of the two varieties of what they call "typical T-wave changes" in the cardiomyopathy that they described.

Dr. William K. Hamilton, Anesthesia: I believe I saw this man, but I'm not entirely certain. If so, I'm rather disappointed. We took some pictures of him as a demonstration of the intense cyanosis one can see without demonstrable respiratory disease. I don't know what happened to them, but I think they should have been included in the data for this CPC.

This man was as cyanotic as any living person I have ever seen—at least any patient who lived for a period of time. We did arterial gas tensions on him while he was receiving oxygen therapy, and found that they were 150 or 160 mm. Hg. As far as we could tell by cursory examination, he had a quite normal respiratory function and high arterial oxygen levels, but *severe* cyanosis. It has been my observation over some years that the extreme and intense cyanosis which one sees is usually circulatory in origin, rather than respiratory. Analysis of arterial blood helped rule out the presence of respiratory disease in this case.

Dr. Bean: Here are the bibliographic data on the paper on alcoholic cardiomyopathy to which I referred. The author is William Evans, the distinguished British cardiologist, and it was published in the AMERICAN HEART JOURNAL for April, 1961 (**61**:556). What they called the "cloven" and "dimpled" T-wave changes in cardiomyopathy may be helpful in some instances, although they wouldn't have been of any use in this particular case.

Dr. Henry E. Hamilton, Internal Medicine: I think I performed the pericardial tap on this man. At autopsy, was there any injury to the heart muscle that could have been related to that procedure?

Dr. Korns: Well, yes, there was a "bruise."

Dr. John A. Gius, Surgery: What is the treatment for alcoholic myocardiopathy?

Dr. Bean: "Don't drink two fifths, or more, of whiskey per day." There is no treatment that I know of, once it has developed. It is a nonresponsive form of heart disease. Its treatment, I think we can all agree, consists of prevention. As the Greeks said, "Medon, agan"—nothing in extreme. That is the way we ought to live.

Dr. John R. Davis, Pathology: Dr. Whalen, in your remarks were you referring to myocardial fibers, or to muscle fibers in general?

Dr. Whalen: I should say that over one-half of the evidence comes from skeletal muscle. However, skeletal and heart muscles are very similar structurally, as you are aware, even to the brushes on the myosin. To the extent that heart muscle has been tested, it appears quite certain that it does contract in the same way. The same can be said of smooth muscle as well, although with even less certainty. I think one can assume, however, that the mechanism is the same in the heart.

Audience: Is there any explanation for the fever in this patient?

Dr. Brown: As far as I know, there is no good explanation. This man may or may not have had some pneumonitis. He showed no evidence of it at the autopsy examination. Can cardiac failure in itself cause fever? I think it is seen sometimes with cardiac failure, as is hypothermia.

Audience: This was a fairly acute course. What is the usual one for a patient with alcoholic myocardiopathy?

Dr. Bean: I don't know. I don't believe that enough cases have been recognized clinically and followed carefully for a period of time so as to permit a generalization. My impression—and obviously it was a mistaken one—was that the disorder tended to go on for many months, rather than for just 10 weeks. I don't know of any study that has been done on this particular problem, but I'm going to have to read some things and find out.

Dr. Korns: As to the chronicity of the condition, Hibbs and others feel that it may go on for a long time—for a number of months, if not years—until a vague point at which the changes in the myocardium become irreversible. Then the patient may die quite rapidly.

SUMMARY OF NECROPSY FINDINGS

1. Alcoholic myocardiopathy
   a. Fatty degeneration, myocardium, severe
   b. Stromal and parenchymal fibrosis, myocardium
   c. Myocardial hypertrophy—cor bovinum (630 Gm.)
2. Congestive heart failure
   a. Bilateral pleural effusion
   b. Pericardial effusion
   c. Ascites
   d. Generalized visceral stasis, severe
   e. Pulmonary edema
3. Hyperplasia, thyroid gland.

STUDENTS' DIAGNOSES

1. Alcoholic cardiomyopathy
2. Congestive heart failure
3. Laennec's cirrhosis
4. Pneumonia.

DR. BEAN'S DIAGNOSES

1. Myocarditis, type unknown
2. Congestive heart failure.

ORNITHOLOGIC NOTE

When one reviews mammalian physiology, he is impressed by the fact that almost every organ system is involved in the maintenance of body temperature, and that metabolism changes so as to accommodate changes in environmental temperature. Despite his well integrated mechanisms for body-temperature control, Homo sapiens has found it necessary to wear clothing to provide himself with insulation, to live in centrally-heated or air-conditioned homes, and if possible to provide himself with an electric blanket. He controls enviromental atmospheres further by means of humidifiers and dehumidifiers. If he is affluent, he migrates to a warm climate in winter and to the northern lake country in summer. Man prides himself that he has attained the zenith in the evolutionary scale, and that his adaptation to an inimical environment surpasses that of all other living organisms.

It is fitting that man assess his stature and give some thought to the other living things that share this hostile world with him. What are their relative ecological positions? A striking example of adaptation is the chickadee that frequents our feeding trays in the winter, to consume vast amounts of suet and sunflower seed, and is busy the year round feasting on insects and their eggs and larvae. That little black-capped bird, weighing less than an ounce, has a metabolism that dwarfs man's in sensitivity and efficiency. He does not migrate with the changing seasons. He can be found throughout the Northern Hemisphere, including the whole of the arctic, in both summer and winter.

Experts in bird lore assert that the chickadee originated on the European Continent and came to North America, perhaps a million years ago, across the land bridge that existed between the two continents. That journey occurred at about the beginning of the Ice Age, and the chickadee adapted itself to the frigid temperatures at the top of the world and developed technics for survival which are amazing. The rapidity with which it converts food into energy and warmth, and the speed of its circulation, which does not leave blood in one place long enough to get cold, constitute remarkable and unusually interesting physiologic adaptations.

George F. Wallace, a professor of zoology at Michigan State University, has reported that in the summer, when the outdoor temperature is around 90°F., the chickadee's heart beats at a rate of about 346/min. When the outdoor temperature in in the forties, its heart rate doubles, and when the external temperature falls below zero its heart rate jumps to 1,000 beats per minute. If stress is superimposed upon cold weather, its pulse rate accelerates to an incredible 1,300/min. for short periods!

This tiny bird has a sensitive thermostat. During the summer, if it is at rest and its stomach is empty, its temperature is 102°F. After eating and in cold weather, its temperature reaches a level of 112°. This variation is in marked contrast to the daily fluctuations of 1.0 to 1.5 degrees observed in normal human beings. A dense coat of feathers, said to be as dense as that of any other bird of the air, is an additional adaptation. Under most circumstances the feathers lie flat, but when the bird becomes cold they fluff out to form hundreds of still-air spaces which provide insulation. This protective device probably has been used by chickadees for centuries beyond number, but comparable technics have been employed by mankind only for a short period of time.

When one observes the chickadee during severely cold weather, he wonders why its delicate feet and legs do not freeze. Wallace reports that on a cold day the temperature of the bird's body, under the feathers, may be over 100°F., but the temperature of the feet may register no more than 30 or 40 degrees. During intense cold, the bird can gradually shut off the circulation to its feet. They are composed, for the most part, of bones and of tendons actuated by muscles in the warmly feathered thighs.

When in anger we allude to some bungling human as a "bird brain," we may be doing our feathered friends an injustice. The chickadee makes its home in a dead tree, where it has hollowed out a cavity 8 or 9 in. long by means of its bill. The cavity is lined with moss, rabbit hair and feathers. Heat from the bird's own body serves as the central heating system, and it can remain snug and warm even in severely cold weather.

"God resisteth the proud, but giveth grace unto the humble."

EARLY TREATMENT OF THE MILDLY HYPERTENSIVE PATIENT

In a recent article on minimal hypertension and insurance mortality, Earl A. Opstad, assistant medical director of the Northwestern National Life Insurance Co., makes a plea for early treatment of the mildly hypertensive patient.* His appeal is based upon an actuarial study of almost 4,000,000 life-insurance applicants on whom data were supplied by 26 life-insurance companies. The figures

* Opstad, E. T.: Minimal hypertension and mortality: plea for early treatment. MINNESOTA MED., 49:587-590, (Apr.) 1966.

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clearly demonstrate an increased mortality among minimal hypertensives. It is pointed out that blood-pressure determinations in this large group of people were made during the normal working day, and that the applicants were considered normal, healthy individuals leading normal lives.

Opstad rightfully asserts that most physicians would not treat a 35-year-old man with a blood pressure of 144/90 mm. Hg as a hypertensive. Life-insurance studies, however, indicate that the expected mortality over a 10-year period for 1,000 standard risks at the age of 35 years is 20, but that the mortality over the same length of time for an identical number of males 35 years of age at the time of examination is very nearly 40 if their initial blood pressures approximated 144/90 mm. Hg. In other words, the actual death rate is 199 per cent of the expected figure.

The actuarial study revealed that at 45 years of age, men with blood pressures of 156/95 mm. Hg had an actual-to-expected mortality ratio of 336 per cent. This meant that there was an excess mortality of 108 per thousand among such men, as compared with normotensive applicants of the same age. The deaths were found to result from cerebrovascular accidents and diseases of the heart.

Similarly, in the Framingham study the four-year follow up of borderline hypertensive subjects without demonstrable heart disease showed an increased mortality. The mildly-hypertensive group had a mortality rate of 62 per thousand, as compared with 26 per thousand in the normotensives. Borderline hypertension was thought to be reflected by readings between 140/90 and 160/95 mm. Hg, and by disregarding the men who were overweight and who had high blood-cholesterol levels, the mortality rate in the group with borderline hypertension was reduced to 37 per 1,000 as compared with 17 per 1,000 in the normotensive group.

Opstad emphasized that important as it is to treat the patient with severe hypertension, it is even more important to treat the patient with early minimal hypertension in an effort to prevent the increased mortality which has been statistically demonstrated. He quoted various studies showing the efficacy of treatment in moderately hypertensive patients—the frequent reversibility of cardiomegaly, cardiac failure, abnormal electrocardiogram and retinopathy—whereas only moderate success has been reported in the treatment of severe hypertension. Numerous reports have shown a markedly reduced mortality in large groups of treated patients, as compared to other groups in whom antihypertensive drugs were not administered.

In the past, it has been customary more or less to disregard labile hypertension. If the initial reading was elevated, but if after a period of recumbency some successive readings were within the normal range, the patient was not regarded as a hypertensive. Opstad asserts that such a concept is erroneous. "Are we," he asks, "in a position to say that it is of no consequence that the blood pressure is increased during working hours, as long as it is normal while at rest or asleep? Life insurance statistics based on blood pressure readings obtained during the working day indicate that this is not so. In males under 40 with blood pressures in the range of 138/88 to 147/92, fatal heart disease is more than twice and cerebral vascular accident more than five times as frequent."

Another concept which has prevailed and which the author asserts is erroneous is that an elevation of the systolic pressure is of little significance as long as the diastolic pressure level remains normal. Life-insurance data refute this idea. They show a rapidly rising mortality with increasing systolic pressures, even though the diastolic pressures are within normal limits.

It is emphasized that any objections to the manner and means of blood-pressure determinations during life-insurance examinations cannot negate the orderly, constant and definite increase in mortality seen with every small increment in blood pressure, starting at levels which are considered low and which are very frequently disregarded.

Opstad concludes that prior to the introduction of safe and effective antihypertensive drugs, reassurance constituted acceptable management in cases of early hypertension, but it contributed nothing to the patients' longevity. With the drugs available today, however, the physician can no longer ignore slight elevations of blood pressure, any more than he can ignore the early signs of other diseases. The significantly increased mortality in subjects with minimal hypertension, as demonstrated by life-insurance statistics, clearly defines the physician's responsibility.

CHRONIC EMPHYSEMA

A report by Levenson and colleagues on a successful program of rehabilitation for a group of patients with chronic emphysema by a multidisciplinary effort at the Moss Rehabilitation Hospital and the Albert Einstein Medical Center, Philadelphia, demonstrates that much can be done to ameliorate the physiologic and emotional handicaps of patients with this disease.*

According to Levenson, deaths ascribed to emphysema, in this country, increased 158 per cent between 1954 and 1959, and emphysema was also the second most common cause for which American workers received permanent-disability benefits

* Levenson, *et al.*: Rehabilitation in management of obstructive pulmonary disease. JOURNAL OF THE ALBERT EINSTEIN MEDICAL CENTER, 14:183-190, (April) 1966.

in 1960. It is generally recognized that the disease is on the increase, and that it is a seriously disabling condition.

The program at the Moss Rehabilitation Hospital was undertaken in an effort to determine whether an integrated effort by related disciplines could reduce the disabilities associated with the disease. Emphysema, according to the authors, creates a series of self-perpetuating physical, psychologic and emotional problems, and also results in serious sociologic and economic difficulties.

In emphysema, the exertional dyspnea that is so characteristic results from the pathologic and physiologic abnormalities of the lungs and the thoracic cage. The marked shortness of breath leads to anxiety and a reduction in physical activity. Reduced activity, in turn, causes increasing muscle weakness and atrophy, early fatigability, diminished muscular efficiency and general debility. Thus a vicious cycle becomes established, and it leads finally to cardiac inefficiency. The rehabilitation efforts were intended to interrupt the vicious cycle, and convert the victims from invalid dependency to self-sufficiency and usefulness as members of society.

The program at the Albert Einstein Medical Center was started in March, 1963, when six beds were set aside at the Moss Rehabilitation Hospital to provide inpatient care for emphysema patients. At the bedside, the appropriate equipment was provided. It included aerosol, oxygen, intermittent positive-pressure breathing apparatus, etc. In physical therapy, a treadmill was used in treating selected patients, and in occupational therapy, a special weighted loom served to strengthen muscles. The pulmonary-function laboratory at the hospital played an important role in the evaluation of this group of patients, and frequent determinations were made before and after treatment. The personnel for the project consisted of an internist specializing in pulmonary diseases, a pulmonary physiologist and his staff, a physiatrist, a psychiatrist, a psychologist, a rehabilitation nurse, a social worker, a physical therapist and an occupational therapist.

The study group consisted of 44 patients treated between March, 1963, and June, 1964. There were 35 men and nine women, and their ages ranged from 41 to 76 years. Twenty of them were between 60 and 69 years of age. The duration of their symptoms before admission averaged eight years. All were disabled to a degree that resulted in unemployment and dependency in everyday living. The average of their lengths of serious disability prior to admission was 36 months, but varied from one to 96. The duration of their stay in the rehabilitation unit was 43 days, on the average. The shortest was 23 days and the longest was 180 days.

It is recognized that cigarette smoking is a major etiologic factor in chronic bronchitis and emphysema. Forty-one of the 44 patients in the study group had been cigarette smokers, but the remaining three had never smoked. Thirty-five still were smokers when admitted to the program. All but five succeeded in quitting tobacco before discharge, and their success was attributed to educational measures and the psychologic support of the staff and the other patients.

On admission, each patient was carefully evaluated by laboratory and clinical methods. The medical survey included pulmonary physiology studies and blood gas studies. The usual measures employed in the treatment of emphysema were supplemented by physical-medicine and rehabilitation procedures. Special attention was given to physical conditioning and to an evaluation of the factors which had contributed to the patients' dependency in the activities of daily living. Psychosocial problems were analyzed, and work and educational histories were evaluated. Patients were given the advantage of an educational program, and group therapy was initiated for them and their families.

There were four different approaches to treatment, all intimately related: medical, inhalation therapy, active rehabilitation, and psychologic-vocational.

Medical therapy consisted of measures designed to improve ventilatory function. The authors emphasized that the most important initial step was to have the patient *stop smoking*. More than half of the group required antibiotics for the treatment of bronchial infection. Bronchodilators were then used as indicated. Congestive failure, if present, was given prompt treatment. Persistent bronchospasm was treated by means of oral steroids and aerosol. A fluid intake of 2,500 cc. was maintained to provide adequate hydration.

Inhalation therapy was designed to clear obstructions of the bronchial tree, to relieve bronchospasm, and to liquify viscid secretions. To improve pulmonary ventilation, oxygen was given, when indicated, and positive-pressure apparatus for administering it was at the bedside. Heated saline aerosol and mucolytic agents were used as required.

The rehabilitation program gave special attention to the improvement of breathing, physical fitness, posture and the activities of daily living. All patients were found to be physically weak, and all had the characteristic thoracic cage, with flaring ribs and fixation in an inspiratory position. Diaphragmatic movement was rarely present.

Physiotherapy proved a very important phase in the treatment of these patients. Instruction was given in diaphragmatic breathing, posture mechanics, and muscular relaxation. Stress was placed upon exercises to strengthen abdominal muscles. General conditioning exercises were first

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employed when the patient was still bedfast, and they were increased when he became ambulatory. Progressive resistive exercises were employed to strengthen all muscle groups. A stationary bicycle and a treadmill were judiciously used. Occupational therapy was closely integrated with physical therapy, and it proved to be a helpful adjunct in testing and demonstrating the patients' ability to perform productively.

The psychological and social aspects of therapy consisted of an educational program for the patients and their families. The nature of obstructive pulmonary disease and the objectives of the various therapeutic measures were discussed. Psychiatrists conducted group-therapy sessions. Problems of vocational readjustment were considered, and solutions for family problems were given individual attention. Help was given by social service in job procurement.

Results of the program were evaluated on the following bases:

1. Changes in exercise tolerance
2. Changes in self-care status
3. Changes in employment status
4. Changes in physiologic tests of pulmonary function.

When tested initially, 15 patients were able to walk less than 500 feet on a treadmill set at an incline of one degree. After an average of 34 days in the program, and under the same conditions, they were able to walk more than 7,000 feet.

At the end of hospitalization, 23 of the 44 patients were no longer dependent or were back at work. Seven were awaiting job placement when they were discharged from the hospital. Thirty of 43 patients had less disability after completing the program. Fourteen were still dependent at the end of their hospital stay, but nine who had been confined to their beds at the outset were ambulatory at its completion.

Physiologic studies at the end of the treatment program revealed no significant improvement, and this finding is in keeping with the experience of others. Despite the lack of improvement in pulmonary-function tests, however, clinical improvement was definite in this group of patients. The results are ascribed to improved physical condition and improved respiratory mechanics, to the correction of complicating medical problems, and to relief from fear and depression.

Levenson, *et al.* concluded that an intensive, integrated and physiologically-oriented program of rehabilitation can be helpful in reducing disability and dependency in patients with chronic obstructive emphysema.

MEDICARE

With the advent of Medicare, the medical profession will find itself in a vulnerable position. As this ambitious program is set in motion, confusion is inevitable, and disappointment and disillusion are certain. The promised Utopia just cannot be realized, for there simply are not enough of either medical and paramedical personnel or of facilities to fulfill the dreams of the planners.

When the chips begin to fly, it is a safe prediction that the politicians and the administrators in Washington will not assume responsibility for failures or inadequacies, or for the fact that the costs far exceed their previous estimates. The medical profession and the hospitals have been the targets of lay journalists for several years, and it can be expected with reasonable certainty that they will bear the brunt of criticism for the shortcomings of this new scheme.

Physicians must bear in mind that their only responsibility is to their patients. Dedicated care of each individual is and will continue to be the only effective way to refute criticism of ourselves and of our profession.

Hospitalization at government expense under the illusion that it is free will create a tremendous increase in demand for admission. This will create serious problems for the hospitals, and pressures will be exerted on each physician to take responsibility for more and more patients. These are pressures which must be resisted, for it is the quality of care that is important. Physicians must not spread their services so thin that the quality of care is placed in jeopardy.

The public must be made to realize that each minor illness, ache or pain does not justify a major medical study or a period of hospitalization. The hospital is a place for sick people who cannot be cared for in the home or in the physician's office. Beds occupied by patients with minor ailments or with chronic conditions deprive the acutely ill of necessary and lifesaving care.

Medicare is now the law of the land, and though the majority of the medical profession are by no means in sympathy with it, they must and they will do their part in its implementation and operation.

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President's Page

Never have I been prouder of my profession than I was, this June, when as one of 200 or more people, most of them physicians, I attended a Medicare briefing in Washington. An overwhelming majority of doctors of medicine had opposed successive proposals for federal financing of health care for elderly people regardless of need. They had been forceful in their opposition, and for many years they had been effective. Most of the M.D.'s gathered in Washington still thought Medicare a very dangerous departure from the American pattern, but they displayed maturity and dignity in accepting it as an accomplished fact.

Not only they but other doctors throughout the country remain intent upon protecting the best interests of their patients. There are many problems for which they are seeking solutions, and I have space in which to mention only one of them here.

At the April, 1966, annual meeting of the IMS, our House of Delegates approved a resolution from the Marshall County Medical Society urging physicians to insist upon Individual Responsibility for the payment of medical-care costs. As this it written, the representatives from Iowa and those from several other states are planning to seek endorsement of that principle by the AMA House of Delegates, in Chicago, and it is likely that it will have AMA approval before the July issue of this JOURNAL is printed.

Each of us who wants to do so can implement Individual Responsibility by looking to each elderly patient for payment, and then by enabling him, if he wishes, to seek partial reimbursement from the Medicare carrier. Thus the inter-personal relationship between physician and patient can be kept inviolate.

D. P. Leinbach

President

THE JOURNAL *Book Shelf*

BOOK REVIEWS

FIFTH NATIONAL CANCER CONFERENCE PROCEEDINGS, 1964, sponsored by the American Cancer Society, Inc., and the National Cancer Institute (Philadelphia, J. B. Lippincott Company, 1965. 764 pages).

It is my opinion that this very specialized book precludes adequate review.

The conference is a compendium by specialists in all of the major types of cancer as well as the epidemiology and biology of cancer, fundamental cancer research, and cancer therapy. The principal value of such a publication is to make readily available for reference the current thinking in the major fields of study of human cancer.

This book is not recommended for the casual bibliophile.—*John W. Green, Jr.,* M.D.

CURRENT THERAPY, 1966, ed. by *Howard F. Conn,* M.D. (Philadelphia, W. B. Saunders Company, 1966. $13.00).

As in previous years, to insure presentation of the latest changes in the methods of treating diseases, CURRENT THERAPY has added a new contributing author in each instance where therapeutic concepts are changing and has dropped an author who represents an obsolete school of thought. This policy brings concise and current presentations to the reader, rather than annual revisions of old ones. If there is no major difference of opinion among authorities, the chapter on a particular disease may be presented by the same expert perennially. If traditional therapy is thought to be the best available, the author includes it along with the recent advances.

In addition, the 1966 edition shows an improved Table of Normal Laboratory Values. A 15-minute period spent in reading these tables is rewarding in itself. It makes one painfully aware of how completely one's memory surrenders once-learned basic information. Pulmonary-function tests, cardiac catheterization values and normal values for gastric analysis are included. The alkaline phosphatase values are listed according to the five methods used in various laboratories.

Interesting treatises are to be found in the section on physical and chemical injuries, including burn treatment and the management of poisonings by household and other agents. Clinical problems are presented involving fluid and electrolyte therapy in adults and children, blood products and substitutes, cardiac arrhythmias and cardiac arrest. A small section clarifies the biochemical dilemma of converting milligrams to milliequivalents or milliosmoles.

This volume is essential for anyone's quick-reference library.—*Thomas D. Ghrist,* M.D.

BOOKS RECEIVED

HERITABLE DISORDERS OF CONNECTIVE TISSUE, by *Victor A. McKusick,* M.D. (St. Louis, C. V. Mosby Company, 1966. $18.50).

UNITED STATES ARMY IN WORLD WAR II, THE TECHNICAL SERVICES, THE MEDICAL DEPARTMENT: MEDICAL SERVICE IN THE MEDITERRANEAN AND MINOR THEATERS, by *Charles M. Wiltse* (Washington, D. C., Office of the Chief of Military History, Department of the Army, 1965. $5.00).

CURRENT DIAGNOSIS, edited by *Howard F. Conn,* M.D., *Robert J. Clohecy,* M.D., and *Rex B. Conn, Jr.,* M.D. (Philadelphia, W. B. Saunders Company, 1966. $19.00).

PATHOLOGY, 5TH EDITION, Vols. 1-2, edited by *W. A. D. Anderson,* M.A., M.D., F.A.C.P., F.C.A.P. (St. Louis, C. V. Mosby Company, 1966. $21.00).

Prize-Winning Film on "The Pill"

An animated movie made by Eli Lilly and Comcompany in eleven days and nights of round-the-clock activity has been selected for a 1966 Golden Eagle award by the Council on International Nontheatrical Events (CINE). The award, the highest that is given to a nontheatrical production, will be made in November at an invitational ceremony in Washington, D. C.

The film, entitled "Fertility Control: The Role of the Oral Contraceptives," was produced as an educational feature for the medical and allied professions.

It is one of a hundred films in thirty-six categories to be selected from thousands of productions. The winners make up what is referred to as the "Olympic team of films." Golden Eagle award winners selected by CINE are entered in more than fifty international film festivals in behalf of the United States. Already the Lilly movie has won a bronze award at the Fifth International Film and Television Festival and has just been selected for entry in the Vancouver IX International Film Festival.

"Fertility Control" was designed to give emphasis to the sequential therapy approach to ovulation control as exemplified by the Lilly product C-Quens®. It has been so successful that 350 copies have been required to meet the demand for showings. The film is distributed through Eli Lilly and Company's own audiovisual film library.

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rge number of investigators have re- ed major improvement in about 75% of es. Some patients have gone into remis- . Relief of stiffness and pain may be fol- ed quickly by improved function and res- ion of other signs of inflammation. And azolidin alka is well tolerated, especially e it contains antacids and an antispas- ic to minimize gastric upset.

traindications
ma, danger of cardiac decompensation; ory or symptoms of peptic ulcer; renal, atic or cardiac damage; history of drug rgy; history of blood dyscrasia. The drug uld not be given when the patient is se- , or when other potent drugs are given currently. Large doses are contraindi- d in patients with glaucoma.

cautions
ain a detailed history and a complete sical and laboratory examination, includ- ing a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

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Iowa Chapter of the American Academy of General Practice

American Academy-Mead Johnson Awards

In 1952 the American Academy of General Practice established a program of scholarship awards to assist recent medical graduates who were interested in general practice and who wished to complete general-practice residencies. Funds for the program are provided by Mead Johnson Laboratories.

This spring, 20 young physicians, who were last year's winners, completed a year of graduate training under this scholarship program. This year, 12 winners for 1966 have been selected from among interns and medical officers on active duty who are interested in general practice as a career and who are in a position to start a general practice residency this summer. Each of the 12 physicians is scheduled to receive a $1,000 award when he starts his training in an approved general-practice residency. The $1,000 award will be paid in 12 equal monthly installments while the winner is completing his year of hospital training. The Iowa Chapter is proud of its part in this program designed to stimulate interest in general practice and to assist young physicians in acquiring an additional year of training.

In 1964, the Iowa Chapter presented two certificates of award to interns at Broadlawns Polk County Hospital who were to continue for a second year in general-practice graduate training at Broadlawns. In 1965, the Iowa Chapter again presented two certificates of award to interns at Broadlawns Polk County Hospital, and they are completing their graduate training program this summer. For 1966, the Iowa Chapter presented one certificate, to Doctor Jo Ellen Maly, an intern at Broadlawns Polk County Hospital. Doctor Maly plans to continue her graduate training at Broadlawns. She is a native of Cedar Rapids and received her MD degree from the University of Iowa College of Medicine in 1965.

MARK YOUR CALENDAR NOW AND MAKE PLANS TO ATTEND THE EIGHTEENTH ANNUAL MEETING AND SCIENTIFIC ASSEMBLY—SEPTEMBER 19-20, 1966, HOTEL SAVERY, DES MOINES, IOWA.

Intensive Pesticide-Health Study

An intensive study of the possible effects of pesticides on the health of human beings is being conducted by The University of Iowa's Institute of Agricultural Medicine in Iowa City. The Institute has been awarded a $135,265 contract from the Office of Pesticides, Bureau of State Services, U. S. Public Health Service for the first year's operation of a "Community Study on Pesticides."

A major objective of the project is to go beyond the type of studies which have dealt primarily with the acute, immediate effects of pesticides on man to an assessment of the possible relationship between chronic disease and long-time exposure to pesticides.

Director of the project is Keith R. Long, Ph.D., an associate professor of agricultural medicine. The study, which is the twelfth to be set up in the nation, will cover primarily Johnson County and other areas of the state yet to be selected.

Each community study has been designed to provide information on a different set of conditions, such as the types and uses of pesticides, the kind of agriculture, and other environmental factors. For instance, studies now in progress include a truck-farming area in California, citrus-growing regions in Texas and Florida, and an orchard area of Michigan. Iowa was chosen for the purpose of learning more about the effects of pesticides on man's health in a dominantly field-crop region.

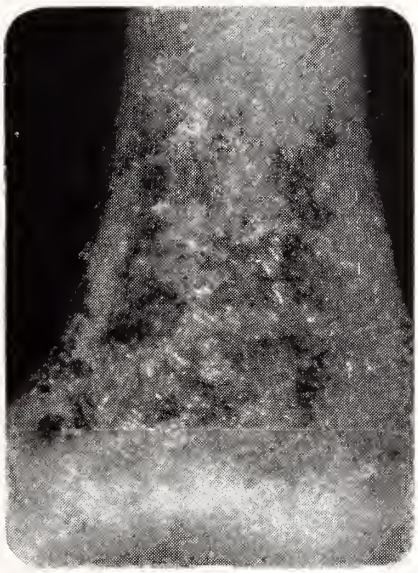
"Within the last 25 years," Dr. Long says, "environmental stress has been increasing as a result of the variety and magnitude of synthetic and natural pesticide chemicals. Scientific and lay groups have shown increasing interest in the challenge that these agents pose to man's health.

"The acute effects of pesticides on man's health have been studied and are fairly well known in most cases. Very little information, however, is available on adverse health effects which might be caused by long-term exposure to pesticides in populations where there is a wide spectrum of pesticide use and exposure.

"Everyone recognizes that pesticides are here to stay. Their importance to the nation's economy is enormous. As pesticide usage increases, however, it becomes very important that we determine whether they are responsible for serious illness and chronic diseases and, if they are responsible, how this can be prevented," Dr. Long said.

Since the founding of the Institute in 1955, the

eczema: scourge of childhood



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ministration and Dosage: Apply sparingly to the affected a 3 or 4 times daily. Some cases of psoriasis may be more ectively treated if the 0.1% Cream or Ointment is applied der an occlusive dressing.

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cautions and Side Effects: Do not use in the eyes or in ear (if drum is perforated). A few individuals react unorably under certain conditions. If side effects are enuntered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Packages: Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

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environmental toxicology section has done considerable research on the effects of pesticides on health, and has conducted basic investigations aimed at finding better ways of determining the toxicities of various economic poisons.

The project will occupy laboratory space on the second floor of the new U. of I. water plant. About 11 persons—analytical chemists, field investigators, and technicians—will be used, with six or seven of them new employees. Some aspects of the laboratory phases of the study will be done at Iowa State University, in Ames, under the direction of Dr. William B. Buck, of the ISU Veterinary Diagnostic Laboratory.

Phases of the study this year involve monitoring high and low levels of pesticide exposure, postmortem examination of human and animal tissue for pesticide residue, and a survey of land usage with relation to pesticide application and its relationship to human exposure.

New Test Aids Diagnosis of Early Cases of Diabetes

The tolbutamide tolerance test may offer greater specificity than the standard two-hour glucose test in diagnosing early diabetes, and a recent oral modification makes the tolbutamide test safer and more convenient without sacrificing any of its reliability. Clinicians at the University of Pennsylvania's Graduate Hospital made this assessment after a study of 105 patients, all of whom had normal fasting blood sugars but abnormal glucose levels two hours after a standard glucose tolerance test (GTT).

Fifty-two patients responded abnormally to the oral tolbutamide (Orinase) test. This correlated significantly with a family history of diabetes, an obstetrical history suggesting diabetes, or patients with an elevated three-hour response to the GTT. "We conclude that the oral sodium tolbutamide test seems to be a valuable additional study in the appraisal of minimally abnormal oral glucose tolerance results, at least in the presence of obesity, liver disease, hyperthyroidism, uremia, myocardial infarction, chronic pancreatitis, spontaneous hypoglycemia, and lymphomas and related neoplasia representing the major disease categories in our study group," said Drs. C. Robert Tittle and John H. Kerr.

Although the *intravenous* tolbutamide tolerance test has been in use for some time, the F.D.A. only recently gave its approval to the *oral* tolbutamide test.

Patients in the group were selected from the wards in two general hospitals, excluding pregnant, postoperative, and unconscious subjects. Their ages ranged from 25 to 75. The report appearing in DIABETES* said a positive family history of diabetes showed up in 41 patients, of whom 35 (85.4 per cent) responded abnormally to the oral tolbutamide test. Out of 19 patients who were 20 per cent or more over ideal weight, 10 had abnormal responses to oral tolbutamide. In each case, however, one or more associated findings suggested subclinical diabetes. The patient groups by age decades were small, but Drs. Tittle and Kerr said the data seemed to indicate that the percentage of abnormal tests was not significantly related to age.

The possibility of preventing symptomatic diabetes depends largely upon the earliest possible detection of the asymptomatic stage, and newer diagnostic technics are designed to that end, they pointed out. Reliability of a diagnosis of mild diabetes should be enhanced when both the GTT and the tolbutamide tests are positive. This does not imply, however, that a normal tolbutamide response positively rules out a diagnosis of diabetes in a patient with impaired glucose tolerance, they cautioned.

They added that results in their study confirmed the opinion of other investigators that the tolbutamide test may be of greatest differential diagnostic value in the impaired glucose tolerance accompanying liver disease.

* DIABETES, 15:212-219, (March) 1966.

Estrogen-Progesterone May Prevent Cancer

The hormonal therapy now used to offset the effects of menopause may also reduce the incidence of breast and genital cancer. Of 158 women followed for 10-14 years by Leis, of New York Medical College,* none developed cancer, though the normal expectancy would have been eight cancer cases in a similar number of untreated women.

In menstruating women with evidence of hypogonadal state, Leis administers 1.25 mg. of natural conjugated estrogen (Premarin) from the fifth to the twenty-fifth day of each cycle, and 5 mg. of medroxyprogesterone acetate (Provera) from the fifteenth to the twenty-fifth day. Patients with surgical menopause, and those who are a year or more postmenopausal, receive Premarin from the first to the twenty-fifth day, and Provera from the fifteenth to the twenty-fifth day. Most patients with intact uteri start mensturating again, and they are then given the regimen for menstruating women.

Administering progesterone as well as simple estrogen, Leis says, restores the physiologic hormonal production cycle of the normally functioning ovary. "Progesterone has many widespread effects besides its well known uterine role," he adds. "It is important to a woman's optimal health, aside from its essential role in successful reproduction."

* Leis, H. P., Jr.: Endocrine prophylaxis of breast cancer with cyclic estrogen and progesterone. INTERNATIONAL SURGERY, 45:496-503, (May) 1966.

THE DOCTOR'S BUSINESS

Partnership Life Insurance

HOWARD D. BAKER
Waterloo

Frequently a question arises in medical partnerships as to whether insurance should be bought against the possibility that one of the partners will die and the survivors will need to compensate his heirs for his interest. This can be accomplished by a system of cross-insurance on the lives of the partners. A policy is purchased on each partner's life, and all of the other partners are the owners and the beneficiaries of that policy. Specifically, in the "A, B, C" partnership, "A" and "B" might own a policy on "C"; "A" and "C" might own a policy on "B"; and "B" and "C" might own a policy on "A." Because of the varied ages of the partners and the different rates applicable to them, it is usual to total the premiums and to charge equal shares to the partners. These shares of the totaled premiums represent personal, nondeductible expense to the partners.

Since the policy on a partner's life is not his property, the proceeds are not included in his estate in case of his death. Rather those proceeds, when he dies, are tax-free income to the beneficiary partners.

ADVANTAGES AND DISADVANTAGES

What are some of the advantages of such a plan?

1. Upon the death of one of the partners, cash will be immediately available with which to liquidate his interest.

2. There no longer is any risk that a partner's estate may not get its money from the surviving partners.

3. In case of the death of one or two partners, there will be no financial burden upon the surviving partners, and the partnership is assured of continuance. Without such insurance, it often is necessary for a partnership to be liquidated in order that a deceased member's interest can be paid off.

There are major disadvantages, however:

1. Indirectly, by paying a prorata share of the cost of all the policies, each partner helps to finance the liquidation of *his own* capital account. Thus, to an extent inversely proportional to the premium on the policy covering his own life, his contribution benefits his partners but not his own family.

2. The advanced age and/or the substandard insurability of one or more partners often makes the cost of such an insurance program extremely high.

3. For partners who are financially independent, it may represent an unnecessary expenditure.

THE BEST APPROACH TO THE PROBLEM

What, then, is the best approach to use in determining whether or not a partnership should purchase life insurance on its members?

1. An exact determination should be made of the capital investment in the partnership. In many manufacturing and retailing firms, the capital investment is extremely high and represents all the assets of the partners. That is not usually true of professional partnerships.

2. A review should be made of the ages, insurabilities and financial resources of all of the partners. That will reveal the cost of an insurance plan, and throw further light on the need for one.

3. A study should be made of workable alternatives to an insurance plan. These include such things as available credit (mortgageability of buildings, equipment, etc.); and arrangements for paying off a deceased partner's interest in receivables as the accounts are collected and settling his remaining capital interest in a series of installments.

EXAMPLE

As an example of a partnership insurance problem and its solution, let us consider the "A, B, C" partnership once more. The partners are doctors who own an office building and equipment valued at $54,000, and they have accounts receivable valued at $39,000. In the event of a partner's death, the cost of liquidation would be $31,000. Dr. "A" is 57 years of age and independently wealthy. He has a physical condition that would increase his life insurance premiums by 20 per cent. Dr. "B" is 41, and could easily borrow funds with which to purchase his share of a partner's interest. Dr.

"C" is 29, and has no resources whatsoever. His maximum credit would be about $5,000.

Here is the solution that they chose. Accounts receivable were made self-liquidating. In case of a death, they will be frozen, and each partner will be paid his interest as they are collected. In their partnership agreement a clause provides that surviving partners have the option of paying off a deceased partner's interest either immediately or over a period of five years in installments of $300 per month, including interest at 5 per cent on the declining balance. As added protection each doctor has his own resources and credit, and the surviving doctors would have a building that could be mortgaged to provide between $25,000 and $30,000 at 5½ per cent interest. We feel that their solution is much preferable to an extremely high-cost insurance plan.

CONCLUSION

Generally, we feel that large life insurance programs are not necessary for professional partnerships, and that the doctors with slender resources would be wiser to buy additional insurance on their own lives, for the protection of their families. This is no more than generally true, but surely the partners should undertake an extensive study, with the help of their attorneys and financial advisors, before adopting a cross-insurance program. Such a study will determine whether a need exists for partnership life insurance, and if so, how large a program is necessary.

Defect May Cause High Uric Acid Levels of Gout

An underlying defect that may cause high levels of uric acid in the blood of patients with gouty arthritis was described as a defect in the transport of amino acids in and out of kidney cells, rather than as an abnormality of purine and uric acid metabolism, according to investigators from the State University of New York Downstate Medical Center. This might indicate that diet has very little effect on the progress of the disease.

Dr. David Kaplan, who presented these findings to the annual meeting of the American Rheumatism Association meeting at Denver, in June, stated that the presence of hyperuricemia remains unexplained, although two mechanisms have been suggested, *underexcretion* and/or *overproduction* of uric acid by the kidney.

Because of the similarity between the methods with which the kidney handles uric acid and amino acids, and because of the intimate association of proteins, derived from amino acids, and purines, of which uric acid is an end-stage metabolic product, Dr. Kaplan and his associates have been studying the role of neutral* amino acids in relation to the hyperuricemia seen in gout.

High serum levels of uric acid, they demonstrated, also are accompanied by high serum levels of amino acids. A single abnormality, the investigators reasoned, which produces resorption both of uric acid and amino acid by the renal tubular cells, as well as an increased uptake of these substances by purine-producing cells, could reconcile the underexcretion and/or overproduction theories. Underexcretion would thus be due to increased resorption of urate by the kidney; overproduction would result from the increased availability of uric acid precursors which get into purine-producing cells because of a defect in the transport of these amino acid precursors in and out of the cell.

To determine such an abnormality which could produce predictable changes in the serum levels and renal handling of amino acids, Dr. Kaplan and his associates, Drs. Herbert Diamond, Stanley L. Wallace and David Halberstam, measured two-hour clearances of uric acid, amino acid and creatinine in 20 hyperuricemic and 22 normouricemic subjects who were fed 5 Gm. each of glycine, valine and arginine after an overnight fast. "The decreased renal clearance of glycine and valine in hyperuricemic individuals, and the decrease in the respective amino acid to creatinine clearance ratios indicate an increased net uptake of these amino acids from the tubular urine by the renal tubular cell," noted Dr. Kaplan.

"The present data are insufficient to determine whether or not this abnormality is restricted to renal tubular cells or whether it occurs in other body cells as well. The similarity of cell-membrane transport systems in several types of cells suggests that an abnormality in amino acid transport across the renal tubular cell membrane might be duplicated in the membrane transport system of other cells.

"This study has demonstrated decreased renal clearance of endogenous and exogenous glycine and valine, two neutral amino acids, by hyperuricemic individuals. Renal clearance of arginine, a basic amino acid, was unchanged. These findings are cited as evidence in favor of a defect in membrane transport as an underlying etiology of primary hyperuricemia. Such a hypothesis could explain both the renal retention and overproduction of uric acid."

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* pH.

Please Mark Your Calendar

Next Year's Annual Meeting of the IMS

April 16-19, 1967

Des Moines

Woman's Auxiliary News

From the President

It is my pleasure to take this opportunity to say "Hi and welcome" to a new year of activities in the Woman's Auxiliary to the Iowa Medical Society. Since the Auxiliary is a continuing organization, with new leaders once a year, we need only to reemphasize our goals and find new ways of promoting them. It is my hope that your State Board will feel, as I do, that we need concentrated communications. To this end, I hope the Board will approve a four-times-a-year newsletter, similar to THE DIRECT LINE at National. That communication would contain all the information with dates and deadlines for the three ensuing months, and should improve our participation through better planning. Though this communication would go to the president of each county, I am publishing it in the AUXILIARY NEWS so that each of you will be forewarned of its probable arrival, and will ask for the pertinent information from it. Some items will also be published in the WOMAN'S AUXILIARY NEWS.

* * *

It was a real privilege to be a guest at the May 10-12, 1966, meeting of the Woman's Auxiliary to the State Medical Society of Wisconsin, held in LaCrosse. We were all very cordially received, met at the Airport, and taken to the Airport for our return home. There was an overall guest hostess, and each guest had an individual hostess.

This meeting celebrated 125 years of organized medicine in Wisconsin, and the Medical Society presented the Auxiliary with a silk map showing their organized areas. There were representatives from Michigan, Ohio, Indiana, Illinois, Kentucky, Nebraska and Iowa—in most instances the president-elect as well as the president.

Each morning's program opened at eight o'clock with a continental breakfast, and the business session started at nine. The county presidents' reports highlighted the local projects and there were some unusual ones, such as "a week-end away from home," and projects in which county Auxiliary members had arranged "physical examinations for their husbands." Some counties give as many as three $200 scholarship in one year. The Disaster Preparedness program in Wisconsin is quite unique and I purchased a set for our chairman. One county made a profit of $1,730 from a flower sale. Most of their funds are channelled into either nursing scholarship programs or AMA-ERF, and one county increased its AMA-ERF contribution by over $1,000.

Thank you Auxiliary members, for making this trip possible. It was a pleasure to meet the various officers from other states, and I shall be looking forward to seeing them again in Chicago.

* * *

I should like to visit as many county Auxiliaries as time permits, and each of you should bring this matter up at your county meetings and then, if you wish, extend me invitations. May I bring at least one other officer with me? Hopefully, my doing so would improve communication, and as we became better acquainted an exchange of ideas would result.

Start planning now for your county Auxiliary's year! M.D.'S WIFE has some excellent suggestions.

Till next month, I am sincerely,

—FRANCES HINES, *President*

News From Around the Hawkeye State

Cerro Gordo County

Members of the Cerro Gordo County Medical Auxiliary were guests of the Mason City Association of Medical Assistants, at Grethen House, Clear Lake, on Thursday, April 14. Sandy Sondrol provided song and guitar numbers. Information was given on the seven-year-old Colombian girl who is being supported by the group.

The May meeting was a brunch at the home of Mrs. C. O. Adams. Reports on the Iowa Medical Auxiliary convention held in Des Moines, were given. Since it was the last meeting of the year, Mrs. George Tice, the new president, reviewed the program for the year that is to begin in September.

Lee County (North)

Mayor Robert D. Tibbets, of Fort Madison, proclaimed local observance of National Future Nurses Clubs Day on May 12.

A display of fields of nursing and health careers

was the principal event with which the Future Nurses Club of North Lee County observed the day. The Fort Madison club includes girls from the schools in this area, and was founded in 1964. It has been nationally chartered as Iowa Club No. 52 by the National League for Nursing, and has 38 members. The club's activities include making field trips to the University Hospitals, aiding fund drives, and assisting at the bloodmobile.

Polk County

New officers installed at the May meeting of the Auxiliary to the Polk County Medical Society were: president, Mrs. O. A. Elliott; president-elect, Mrs. B. M. Merkel; first vice-president, Mrs. L. G. Peterson; second vice-president, Mrs. E. J. Hertko; corresponding secretary, Mrs. R. E. Preston; recording secretary, Mrs. B. B. Augspurger; and treasurer, Mrs. D. C. Young.

The luncheon held at the Wakonda Club was followed by a very entertaining program "Vacations Unlimited," given by Mr. and Mrs. Maynard Reece.

Scott County

Officers of the Woman's Auxiliary to the Scott County Medical Society were installed at a luncheon, on June 9, served at the Outing Club, in Davenport. Mrs. R. M. Perkins is president; Mrs. A. W. Boone, vice-president; Mrs. D. A. Losasso, corresponding secretary; Mrs. C. M. Updegraff, recording secretary; and Mrs. W. D. Edgerton, treasurer. Members-at-large are Mrs. J. W. Agnew, Mrs. R. J. Hoffman, and Mrs. J. E. Sinning, Jr.

Webster County

The annual sale of articles handcrafted by homebound handicapped persons in Iowa was held Thursday, Friday and Saturday, May 5, 6, and 7 in the Gates Department Store, Fort Dodge.

The full amount of the purchase price is sent to the person who made the article, for the Easter Seal Society covers the cost of handling, and the store in which the sale is held donates the space. Included were needlework, rugs, leather articles, jewelry, children's toys, table mats, children's clothing, aprons, tea towels, pillow cases and many miscellaneous items.

Mrs. Jerry W. Lawson and Mrs. Gary LeValley were chairmen for the sale. Mrs. Roy Hutchinson is the Auxiliary president.

Wasama

Officers of the Woman's Auxiliary to the Student American Medical Association were installed at its senior party at the Phi Beta Pi fraternity house in Iowa City. The new officers are: Mrs. Alan Munson, president; Mrs. Thomas Hicklin, first vice-president; Mrs. Richard Adams, second vice-president; Mrs. Mark Connelly, secretary; and Mrs. Kirk Van Rooyan, treasurer.

The University of Iowa Chapter was awarded the "Chapter of the Region" award at the national WASAMA convention held in Los Angeles, California. Included in the region are Iowa, Illinois, Minnesota, Wisconsin, Nebraska, and North and South Dakota. Mrs. Jerry Jochims, retiring chapter president, accepted the award.

Gifts of Talent and Service

Doctor and Mrs. Clark Rominger of Waukon have recently returned from a month's assignment in the "Holidays for Humanity" program. Instead of a vacation of touring and sightseeing, they worked in a clinic operated by the Franciscan Sisters at Minas de Oros, Honduras. Mrs. Rominger, a member-at-large of our Auxiliary, said, "It was our desire to give of time and talent, rather than just our money." They feel that they gained much more than they gave, and they are planning to apply for another assignment in the near future.

Mrs. Rominger, a registered nurse, worked in the clinic in addition to teaching sewing and making dresses from material she purchased in the village.

A Visit to the Nebraska Auxiliary

Paraphrasing Mrs. Asher Yaguda's speech as president-elect: Happiness is . . . going to the Nebraska State Woman's Auxiliary to the Medical Association's Annual Meeting in Lincoln, Nebraska, May 2, 3, and 4. The welcome mat was out for Mrs. R. E. Hines, the state president, and me, the very minute we arrived. Dr. and Mrs. J. Whitney Kelley, Dr. and Mrs. Fay Smith, and Dr. and Mrs. Arthur Brown were our self-appointed hosts and hostesses on Monday evening, and we learned how their State University has grown to meet the state's increased needs for facilities.

On Tuesday we were guests at a pre-convention executive board meeting and at an 8:15 no-host breakfast, with Mrs. Kelley presiding. We heard reports from the officers and state chairmen before attending the keynote address, in the ballroom, by James Z. Appel, M.D., president of the American Medical Association. It was a combined meeting for the men and women, as was the luncheon which followed. The special speaker was The Honorable Carl T. Curtis, U. S. Senator from Nebraska, who spoke on "Medicine and Its Future Impact on the Economy of the Nation." The Woman's Auxiliary annual meeting opened in the afternoon with reports of county presidents, followed by the Memorial Service, election of officers and their installation.

MRS. M. E. OLSEN, *President-Elect*

1966 Essay Awards

The annual AAPS Essay Contest, sponsored jointly by the Iowa Medical Society and its Woman's Auxiliary, had two Iowa winners at the national level this year. Paul Raymond, of Boxholm, son of Rev. and Mrs. J. William Raymond, won first prize of $100 in the state contest and was chosen fifth prize winner in the national contest, and thus was given another $100 in prize money.

The second prize of $50 in the state contest went to Susan Miller, of Oelwein, a senior at Oelwein Community High School, but she was named *first prize winner* at the national level and received $1,000 in prize money. This award was made at a luncheon in her honor by officials of the Iowa Medical Society and the Woman's Auxiliary at the Society's headquarters in West Des Moines. Miss Miller will enroll at the University of Iowa in the fall.

The third prize in the state contest was awarded James L. Starr, a senior at Clinton High School.

Both the first- and second-place winners wrote on the subject "The Advantages of the American Free Enterprise System," and the third-place winner chose as his subject "The Advantages of Private Medical Care."

Wherever schools provide contestants, the county medical society and the county Auxiliary cooperate in contributions toward prize money for the local contest. At the state level, the Auxiliary conducts the contest and the Iowa Medical Society awards the prize money.

Mrs. Glen E. Nielsen, Des Moines, has been the Auxiliary's state essay chairman the past two years. F. G. Ober, M.D., president of the Iowa Medical Society for 1965-1966, presented the state prizes at a luncheon during the Woman's Auxiliary annual meeting.

Your Place in the Pattern

SAMUEL P. LEINBACH, M.D.
President, Iowa Medical Society

An address at the 1966 convention of the Woman's Auxiliary of the Iowa Medical Society.

I'm sure that most of my fellow physicians envy me the privilege of bringing greetings to the Woman's Auxiliary from the Iowa Medical Society. Most of us have but dim memories of the courses that we took in English literature while in college, but though we may have forgotten the source of the quotation, all of us are aware that "a thing of

State winners of the 1966 AAPS Essay Contest are shown with F. G. Ober, M.D., then president of the Iowa Medical Society, who presented their awards. They are from left to right, Susan Miller, Oelwein; F. G. Ober, M.D., Burlington; Paul Raymond, Boxholm; and James Starr, Clinton.

beauty is a joy forever." In the minds of most men, women fall in this category. You physicians' wives have many other qualities of which your husbands are justly proud, and about which I shall speak later.

Webster describes *auxiliary* as—conferring help or aid; assistant, supporting. I did not attempt to look up the definition of *woman* because vast volumes have been written about this subject, and yet the subject has not been fully described. Women do have many characteristics, qualities and attributes that distinguish them from men. One of the most important, Victor Hugo described by stating, "Men have sight; women have insight." Of course, this is but one of the reasons why, in being the wife of a physician, you play such an important role. I am sure every physician would agree that much of the success which he achieves as an individual can be attributed to his closest and best partner, his wife. Likewise, much of the success of organized Medicine, whether it be on a county, state or national level, is also due to its partner, the Woman's Auxiliary. As a committee of the Iowa Medical Society, you fill a most important role for which there is no substitute.

Though the A.M.A.'s Woman's Auxiliary, started in 1922, and the Iowa Medical Society Auxiliary, founded in 1929, have existed but a relatively few years, the impact that your organizations have made in providing improved medical and health resources to the people of our country has, indeed, been tremendous. Their accomplishments have been many in the field of better public relations, promotion of sound legislation and improved health education, both nationally and on a local level. To mention but a few of the many activities of your State Auxiliary, I cite your health education loan fund program for the training of students in the various health fields, your activities in securing contributions to the American Medical Education Foundation, your sponsorship of the statewide essay contest, the winners of which are to be announced at this meeting, the health booths that your local Auxiliaries have provided at county fairs, and your promotion of the sales of the handiwork done by handicapped people. Many of the members in your Auxiliary have been active in the development of highway and home safety programs, and many of you have been engaged in the development of better health facilities of all types throughout the state.

Some of your accomplishments can be measured tangibly, but much of the good you have done in all areas can only be surmised. Without exaggeration, it can be said that you have been a tremendous influence for good. Being the wife of a physician requires that a woman have profound understanding, ever-enduring patience, and great compassion toward her husband's responsibility. Recently I ran across the program for the day given by the Woman's Auxiliary of the Nebraska State Medical Association to honor the wives of senior medical students. On that printed program were a number of very clever quips and statements. A poem which I liked was entitled, "The Spouse in the Doctor's House":

Oh, for the life of a doctor's wife,
It's a wonderful life—it's fine!
You struggle to fix his dinner by six,
And he doesn't come home until nine.

You play the host and carve the roast,
And pray he'll return from his call.
He's invariably late to a play or a date—
Or he doesn't turn up at all!!!

So pity the spouse in the doctor's house,
The spouse of the house sublime.
For though she is wed, it may truly be said,
She is husbandless most of the time.

You are well aware that never in the history of medicine have physicians been more in need of support from their wives, nor has organized medicine ever needed the help of its ally, The Woman's Auxiliary, more than today. Tremendous changes have occurred and are occurring in medicine. The scientific advancements in medicine each year exceed those that occurred over hundreds of years during the earlier phases of our history. This, of course, is good. However, as always occurs in the wake of progress, troublesome problems continually arise. I shall relate but a few of the areas of concern. Because of the vast increase in medical knowledge, there has been a strong and necessary trend towards specialization and sub-specialization. This is needed if we are to utilize all the tools now available to restore health. Sophisticated new data-processing devices are being developed and made available in order to collect, process and interpret information given by the patient regarding his symptoms. In addition, electronic equipment is being used to carry out diagnostic procedures in the examination of the patient, as well as in doing multiphasic laboratory procedures.

Medicine must take care, however, that in treating the diseases from which the patient suffers it does not lose sight of him as a person. Early physicians treated only the person, for too often the physician could do nothing to alleviate the disease from which a patient suffered. Now, with the best of armamentariums for healing, we must make sure that we don't overlook the patient as an individual as we cure his disease. All whose duties relate to health—and these include physicians' wives—must endeavor to recognize the greatness and goodness in each person. Gene Richter stated, "Individuality is everywhere to be spared and respected as a root of everything good."

Across the country there is a tremendous shortage of physicians in all areas of medical activity

and in practically all geographical locations. The need for physicians in general practice and family medicine is especially great. With medicine becoming ever more complex and sophisticated, there is a need for more physicians than ever before to take care of a given number of people. In addition, our population is greater than it has ever been before. To carry out the research activities that promise ever greater medical discoveries, countless physicians must work in experimental clinics and laboratories. In recent years there has come to be a critical shortage of the competent medical educators who are so necessary in the training of additional physicians.

In many of the rural portions of the United States, the shortage of physicians has reached critical proportions. At the National Rural Health Conference sponsored by the AMA which was held recently in Colorado, I had the privilege of hearing faculty members from medical schools in Oklahoma, Kansas and Nebraska talk about their physician-shortage problems. It would seem that some of the rural areas of those states have greater physician shortages than do we. However, we too have rural communities with too few doctors. Unfortunately young physicians are often unavailable to replace older physicians as they leave their practices because of retirement or death. Probably one of the most important causes of physician shortages is the great number that are involved presently in the federal services. Recent figures show that there were 26,000 physicians under the jurisdiction of the federal government, either in the military or in others of the governmental branches. New medical schools are being created rather rapidly, and present schools are expanding their enrollments. Students in each class registered at the Medical College at the University of Iowa will soon be increased from 125 to 160. It is stated that out-migration of graduates from our medical school is in near balance with the number of out-of-state medical school graduates coming into Iowa. However, a physician shortage does exist in Iowa, and it is probable that this deficiency will continue for some time.

MEDICARE

Supreme Court Justice Louis D. Brandeis once stated, "Experience teaches us to be more on our guard to protect liberty when the government's purposes are beneficent." This statement seems especially apt today, for never in the history of medicine in the United States has the impact of federal legislation been so overwhelming as it has within the past 12 months. In part, I speak of the Medicare bill. As you know, the first portion of this bill is to be implemented on July 1, 1966. In general it provides for hospital care under Part A for persons over 65 who are covered under the Social Security program. All who are recipients of Social Security payments are automatically covered for portions of their hospital care under the program. The Part B portion is voluntary on the part of the recipient, and relates to payment for physicians' services and for certain health services outside the hospital. As you know, the Social Security payments were recently increased by $4.00 per month for all now covered under the program. If the recipient agrees to a deduction of $3.00 from his monthly payment, the federal government agrees to contribute a like sum to pay for physicians' care and for certain in-the-home ancillary health services.

Medicine generally was strongly opposed to the passage of the Medicare bill, and its reasons were valid and totally unselfish, although the individual physician might prosper for a time under the provisions of the program. However, Medicare is now the law of the land, and although virtually forced to comply with the program, most physicians will do all they can to protect the integrity and effectiveness of medical practice.

The Iowa Medical Society felt strongly about the validity of the concept that physicians should continue getting their usual and customary fees, and that any adjustment of fees should be the consequence of an understanding between physician and patient. Only thus will it be possible to protect not only the integrity of the physician but the individuality of the patient himself. Representatives of the Iowa Medical Society, at the Interim Meeting of the House of Delegates of the AMA, in Philadelphia last fall, contended strongly that the usual and customary fee concept should be maintained, and that concept was approved by the AMA House of Delegates. Under the Medicare program, the individual physician is allowed a choice of whether or not to be an "assignment physician." Under the assignment method of payment, his fee would come directly from the government, excluding the deductions which the law provides that *the patient* should pay towards his care. Most doctors, I think, will choose to be "non-assignment physicians." Most of them believe in the concept of individual responsibility. Under such an arrangement, the *physician* deals directly with the patient, provides services, and looks to the patient directly for compensation for services rendered. When the patient pays his bill, the patient may, if he chooses, have the doctor give him a receipted statement which he can then present to the federal government for his partial reimbursement under the provisions of the Medicare Law. This, at least in part, keeps the government out of the relations between the physicians and his patient.

TITLE XIX

The second portion of the Medicare bill (Title XIX) will go into effect in 1967. It provides for sharing between the State Welfare Department and the federal government the expenses of health care for dependent children, the chronically and per-

manently disabled persons, the blind, and others who are indigent. This part of the Medicare Law, of course, will further open the flood gates of federal intervention in the health care field.

The Law provides that a carrier or fiscal intermediary is necessary in each state for the processing and payment of claims incurred under that portion of the Medicare program which provides for the physician's services. That portion of the Medicare bill (Title XVIII), as I mentioned, goes into effect July 1, 1966. The Iowa Medical Society strongly recommended that the Iowa Blue Shield be assigned that role, and it is pleased that the assignment has been made as recommended. It is hoped that a similar assignment to Blue Shield will be made for the Title XIX part of the Medicare bill, which, as I mentioned, will take effect in 1967.

HEART DISEASE, CANCER AND STROKE AMENDMENTS OF 1965

In October, 1965, Congress created the Commission on Heart Disease, Cancer and Stroke (the DeBakey Program). This program proposes to reduce mortality from heart disease, cancer and stroke by: (1) developing special expertness in the diagnosis and treatment of these diseases through a regional medical network; (2) centralization in regional centers to give management to those patients who require special technics; and (3) supporting and renewing the care of patients with these disorders by linking the institutions and personnel that provide the care to the research institutions searching for new methods. This program actually has a categorical or disease-centered approach. The supposition is advanced that improved medical care will occur through a strengthening of all parts of the medical network, and that special expertness will be developed by physicians in the field.

This is a complex proposal that could have far-reaching impact on medical practice. The DeBakey Committee of the Iowa Medical Society recommended that a study be made of the need for and desirability of such a program in our state. This recommendation *for study only* was endorsed by the Board of Trustees of our Medical Society.

CONCLUSION

In the foregoing paragraphs I have but outlined some of the problems that we face in medicine today. As citizens, all of us should be concerned about many of the changes that are occurring in our way of life. Women have an important role in today's changing world, for as A. Marten stated, "If we would know the political and moral conditions of the state, we must ask what rank women hold in it. Their influence embraces the whole of life." This statement expresses very well the need for women to be active in all areas of our society.

I feel that there should be great concern about some of the insidious changes that are occurring in our attitudes and standards. I have often thought that if we were to assign a name to the period in which we live, we could best call it "The Age of Indifference." All of us, in varying degrees, are irresponsible in our duties as parents, as neighbors, as members of committees, as supporters of churches and as citizens of our government at all of its levels. Theodore Roosevelt, writing on the preservation of America, stated, "The things that will destroy America are prosperity at any price, peace at any price, safety first instead of duty first, and love of soft living and the get-rich-quick theory of life." The result of this can be seen in the breakdown of the home, in the increased incidence of juvenile delinquency, in the decreasing levels of integrity, in the general indifference as to what happens to one's neighbor, and in the widespread lack of concern about the future of our country.

Many have pointed to the similarity between the transitions occurring in American life today and those that occurred in the Grecian and Roman civilizations. I am not a pessimist. I feel that the future of our country can be great. However, I contend that it is up to every thinking American to be active in all areas—not only in those which relate to today but also in those affairs that will have manifestations in the future.

Every doctor owes contributions to his profession beyond his duty to care for his patients. We, as physicians, have a great heritage and belong to a noble profession. Every doctor's wife—his chief partner and supporter in carrying out his role—also needs to be interested in not only what happens today but what happens in the future. Max Lerner stated, "Of the many things that we have done to democracy in the past, the worst has been the indignity of taking it for granted." All of us need to do all we can to protect the rights of the individual to aspire and to achieve, or even to fail. We are losing those rights through governmental intervention. Loss of these rights destroys people as individuals, and makes us a nation of puppets. We must be active in promoting the basic principles in which we so strongly believe. We can be strong only by being active in all aspects of our society, whether it be in political affairs (always free to select the party of our choice) or in our daily relations with the individuals whom we encounter. It cannot be denied that the trend towards the regimentation of our population is a dangerous threat to the future greatness of our country. Regimentation is like an avalanche of water on a hillside that threatens to wash away all goodness, vitality and, in fact, the very soil itself. A few sturdy trees firmly planted in strategic locations can prevent the irreparable erosion and destruction. If our society is to maintain its greatness, we as individuals and together must stand for time-

proven principles of goodness. We must stand firm in the interest of a better country and a better world.

You who were blessed to be born women have an important role. Richard Sheridan wrote, "Women govern us; let us try to render them more perfect. The more they are enlightened, so much the more we should be. On the cultivation of the minds of women, depends the wisdom of men." I should like to add to this quotation: "Upon the willingness of women to assume their share of responsibility depends the preservation of the greatness of our civilization in all its being." Women do have an important place in the pattern of life.

Vision Screening

A 2½ day Preschool Vision Screening Workshop for Iowans interested in setting up new preschool vision screening programs in their communities was held in Des Moines in May. Co-sponsors of the workshop were the Iowa Society for the Prevention of Blindness and the Division of Maternal and Child Health of the State Department of Health.

The main speaker at the workshop was Alson Braley, M.D., head of the Department of Ophthalmology at University Hospitals. Dr. Braley commented on the need for more ophthalmologic services in connection with the field clinics of the State Services for Crippled Children. "The lag has been caused mainly by a problem in staffing the clinics with ophthalmologists," he said. "Even at the few clinics in which ophthalmologists have participated (about 7 or 8 of the 40 field clinics held), 20 to 25 children have been found to have serious vision problems. In some cases blindness could have been prevented if the defects had been discovered earlier."

Dr. Braley also expressed the belief that pediatricians should be on guard for eye defects, and said it would be desirable to have ophthalmologists on the staffs of baby clinics.

Responding to a query from the audience as to the need for more ophthalmologists in Iowa, Dr. Braley stated that the limited physical facilities of the Department of Ophthalmology at University Hospitals do not permit training as many students as are needed to supply Iowa with enough ophthalmologists.

Dr Braley commented that at just one field clinic last year in Spencer, 13 children were found to have amblyopia. This, he said is a condition in which a child can see out of only one eye because he has not learned to use the other one. It is a common defect of children with crossed eyes, but it is also found in other youngsters. Treatment is best started when the child is one or two years old.

Following the formal training, a practice session of screening preschool children was conducted. Children screened were four-year-olds from two Des Moines day-care centers. Of the 41 children screened, 11 were found to have eye defects and were referred for thorough eye examinations. Assisting in the practice sessions were trained volunteers from the Des Moines project.

Each volunteer attending the workshop was presented a certificate of merit as evidence of participation in this workshop by Madelene Donnelly, M.D., director of general services, State Department of Health. Chairman of the workshop was Charlotte Fisk, M.D., Des Moines pediatrician and acting on the committee were Robert H. Foss, M.D., chairman of the medical advisory committee of the Iowa Society for the Prevention of Blindness, and Thelma Luther, director of the Iowa Public Health Nurses.

The last half-day session of the meeting was especially designed for school and public health nurses. Miss Thelma Luther acted as moderator, and the group heard talks by Author H. Downing, M.D., a Des Moines ophthalmologist, Kenneth Eaton, a visual consultant of the State Department of Public Instruction's Division of Special Education, Martha Rolland, R.N., a school nurse in Des Moines, and Betty Marvin, of the National Society for the Prevention of Blindness.

The nurses received advice on ways to improve school vision-screening programs, were urged to use volunteers in such programs, and were also informed of some of the ways in which the Department of Public Instruction hopes to improve school vision-screening programs. Dr. Downing stressed the medical reasons for vision screening, told the group about some of the common causes of eye problems in school age children, and outlined the role of the school nurse in the detection of such problems. Miss Marvin, NSPB, gave some directions regarding the use of eye charts in schools, and Mrs. Rolland described the help that volunteers from the Iowa Society for the Prevention of Blindness have given her in screenings at kindergarten roundups.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

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President-Elect—Mrs. M. E. Olsen, Minden 51553

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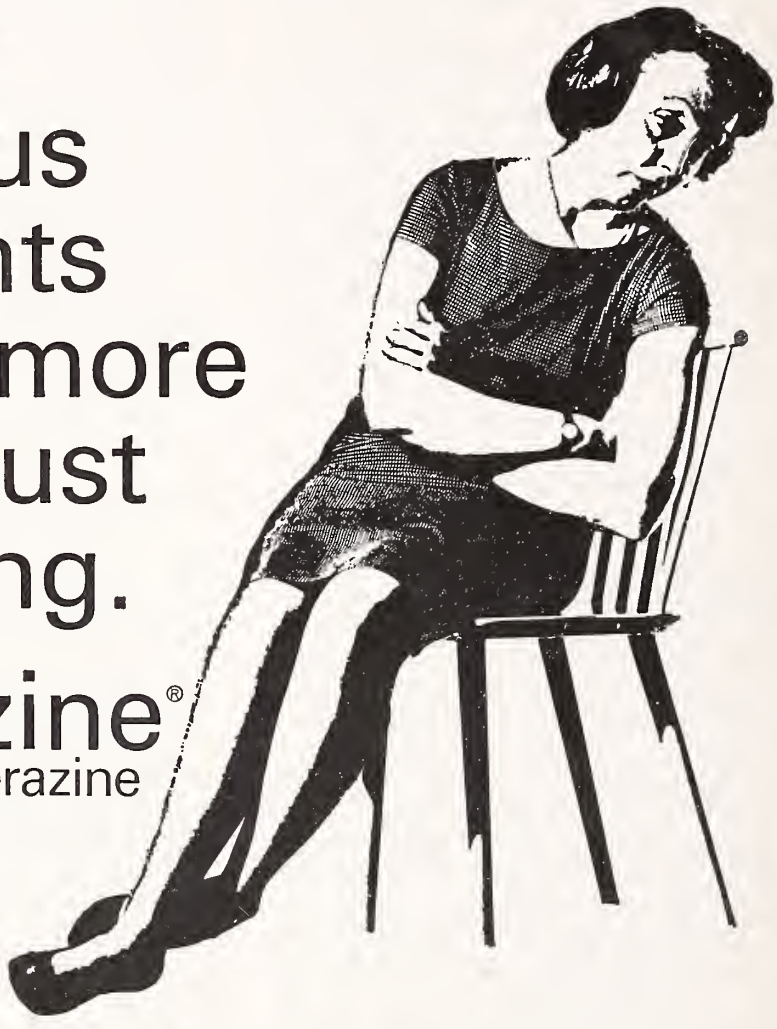

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STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Methods of Obtaining Immunizations for the Medically Indigent

For our purposes "medically indigent" is defined as any parent, regardless of income, who tells our field representative or public health nurse that he or she cannot afford to have his or her child or children immunized. The parent does not necessarily have to be poverty stricken, and no "means test" is applied. In 99.9 per cent of the cases of this kind, the family physician has agreed with our determination that the family is medically indigent and needs help.

PUBLIC ASSISTANCE RECIPIENTS

The Iowa State Department of Social Welfare provides funds for the medical care of all children who are members of families receiving public assistance. Although immunizations are encouraged, they are not mandatory. The case worker informs the family about the availability of this medical care, and a high percentage of such welfare recipients take advantage of the services offered. However, during the course of field follow-up of newborns conducted by public health nurses (covering about 50 per cent of the state) and field representatives of the immunization project (covering the other 50 per cent), a relatively small number of ADC children have been encountered who have not received their immunizations. These workers' procedure for getting these children immunized is as follows:

1. Educate the parents about the need for immunizations, and attempt to motivate them so that they will take their children to the doctor.
2. Contact the case worker responsible for the family, inform him or her of the problem, and ask for assistance in motivating the family to follow through with the immunizations.
3. Contact the physician who will handle the administration, offer the vaccine we supply, and in general establish some rapport.
4. After a reasonable amount of time, check with the physician to determine whether the family have started the immunization series and are following through.

THOSE NOT ON PUBLIC ASSISTANCE

The solution to the problem of immunizing children from "medically indigent" families who are not on public assistance is more complex. Except for the measles vaccine, the cost of the biologics portion in an immunization series is relatively minor when compared to the administration and office visit portion of the fee charged by physicians. Therefore, it would be insufficient to reduce the fee by the amount of the vaccine cost alone. In most cases the fee would still be beyond the "ability to pay" of the "medically indigent." It is, therefore, necessary to obtain the cooperation of private practitioners in reducing the fee beyond the cost of the vaccine. In most cases this means foregoing his charges for professional services entirely.

When a public health nurse or field representative learns of susceptible children in a medically indigent family that is not on public assistance rolls, the following procedures are initiated:

1. A home visit is made. The parents are given information about immunizations which *all* of their children need (newborn and siblings) and how they should be scheduled. The name of their family physician is obtained and an agreement is reached as to how much, if anything, they can pay him if he should agree to do them.
2. An office visit is made to the family physician. He is informed of the immunization problem regarding this particular family and is briefed on the general operation of the newborn maintenance aspects of the Iowa Immunization Project. He is told how much the family can pay, if anything, and is asked whether he will administer the immunizations on that basis. The physician is also informed about which children in the family need the immunizations and what they need, i.e., if he asks for this information. The vaccine needed for the family is offered, and a starting date is set.
3. The family is contacted again, informed as to when the children are to start on the needed immunizations, and asked to contact our office should any problems arise.

mail and is asked to notify us, by a self-addressed

4. A month later, the physician is contacted by post card supplied to him, whether or not the family kept its appointment.

Should the family physician refuse to administer the immunizations at the reduced fee (or free of charge), he is asked whether he has any objections to their being administered by another physician. The president of the local medical society and the local health officer (usually a physician in private practice appointed by the medical society) are then contacted and asked to provide a solution to the problem. In more than six months, and after referring more than 300 such cases to family physicians, we have encountered only one refusal.

One other aspect of the Iowa Newborn Maintenance Follow-up procedure which may have a bearing on the excellent cooperation received thus far from the private physician, is the "must" visit made to the president of the county medical society prior to any field follow-up activity in a county. The field representatives brief the president (and local health officer, if there is one) on how many families he intends to contact, and on the types of information he may want. He is asked for suggestions and counsel on how the follow-ups should be handled, and what to do about medically indigent families who do not have family physicians. Since 50 per cent of the counties in Iowa have fewer than 10 practicing physicians each, the "word" gets around fast, and before the investigator completes his contacts with the families, most of the physicians in the county know why he is there and that they may be called upon for help.

Should Athletes Swim?

As research proves them to be fallacies, old fears and misconceptions about training programs for athletes gradually are fading away. Among the most recent to go is the taboo against swimming for non-aquatic athletes who seek to be in top shape. Swimming and training for other sports are not only compatible but can be mutually supportive. Swimmers now are weight training to gain added power in their strokes. Other athletes, including trackmen and football players, are swimming in and out of season for relaxation and fitness. Their coaches and trainers, freed from old fears, are taking advantage of basic principles of muscle physiology:

- A muscle responds according to the nature of the demands upon it.
- Brief maximal or near-maximal work yields the type of strength helpful in all-out short-burst performances.
- Repetitive submaximal work yields the type of strength helpful in prolonged endurance performances.
- Stretching exercise combined with the above yield a firm but flexible agility.

Swimming by itself will not ensure the degree of leg strength desired to ready a tackle or half back for contact play, because in swimming the knee is not overloaded throughout its range of motion. Moreover, water does not give sufficient resistance to demand single maximal efforts. However, swimming does not detract from the strength gained through other activities in the training regimen.

Morbidity Report for Month of May, 1966

Diseases	1966 May	1966 April	1965 May	Most Cases Reported From These Counties
Diphtheria	0	0	1	
Scarlet fever	679	1,085	392	Bremer, Johnson, Marshall, Polk, Woodbury
Typhoid fever	1	1	0	Des Moines
Smallpox	0	0	0	
Measles	1,064	1,580	833	Black Hawk, Buchanan, Butler, Scott
Whooping cough	2	21	8	Grundy, Wright
Brucellosis	1	2	10	Buena Vista
Chickenpox	655	1,016	476	Black Hawk, Dubuque, Johnson, Polk, Scott
Meningococcal meningitis	3	2	3	Polk
Mumps	509	551	448	Cedar, Muscatine, Warren
Poliomyelitis	0	0	0	
Infectious hepatitis	59	44	53	Black Hawk, Dubuque
Rabies in animals	17	21	32	Boone, Johnson, Story
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	29	29	24	For the state
Syphilis	93	94	82	For the state
Gonorrhea	215	275	231	For the state
Histoplasmosis	0	5	3	
Food intoxication	0	1	0	
Meningitis (type unspec.)	2	1	3	Dubuque
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	1	
Salmonellosis	7	14	3	Linn, Story
Tetanus	0	0	0	
Chancroid	1	1	0	Pottawattamie
Encephalitis (type unspec.)	0	1	5	
H. influenzal meningitis	1	3	0	Floyd
Amebiasis	0	2	2	
Shigellosis	1	1	1	Polk
Influenza	3,657	4,074	86	Entire state

State of Iowa

VENEREAL DISEASE DIVISION — STATE DEPARTMENT OF HEALTH — Iowa (Area)

March 1966 (Period)

VENEREAL DISEASE INVESTIGATION REPORT*

TYPE SUSPECT	Total Closed	DISPOSITION: EXAMINED—INFECTED: No.	Per Cent of Total Closed	BROUGHT TO TREATMENT: No.	Per Cent of Total Closed	P & S	Early Latent	Late	Cong.	G C	Other V D	Under R X Prior	EXAMINED NOT INFECTED: No.	Per Cent of Total Closed	NOT EXAMINED: No.	Per Cent of Total Closed	Cannot Locate	Out of Juris.	Ins. Info.	Other
Contact (Sexual and familial)	165	101	61.2	63	38.2	1	1		3 Epid	58		38	40	24.2	24	14.6	1	9	14	
Contact (Armed Forces)	5	4	80.0	4						4					1	20.0			1	
Contact (Suspected)	6												4	66.7	2	33.3		1	1	
Selectee																				
Positive prenatal	2												2	100.0						
Positive premarital	1	1	100.0									1								
Positive diagnostic	55	35	63.7	5		2	1	2				30	18	32.7	2	3.6	1			1
Lapsed patient																				
Transfer																				
Other Y	15	10	66.7									10	5	33.3						
TOTAL	249	151	60.7	72		3	2	2	3 Epid	62		79	69	27.7	29	11.6	2	10	16	1

* Based on Epidemiologic Reports Closed During Month.

Decline in Reported Measles Cases

Approximately 12 million American children have been immunized against measles (rubeola) since the vaccine was licensed three years ago, and there has been a major decline in reported cases.

The May 23 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION reported these preliminary figures from the U. S. Public Health Service: During the first 17 weeks of this year, reported cases were down to 125,966, compared with 162,029 for the same period in 1965. Last year's total reported cases (266,222) was less than half as large as the number of a decade earlier (555,156 in 1955).

"We really are pretty far along toward measles eradication right now," said Robert J. Warren, M.D., chief of the Childhood Virus Disease Unit at the PHS' Communicable Disease Center in Atlanta, Georgia

Rubeola incidence shows periodic peaks, and past experience had indicated that major outbreaks might be expected in the U. S. early this year. The chief the Communicable Disease Center, David J. Sencer, M.D., cautioned, however, that reported measles cases probably represent only about 10 per cent of the actual number. Even with immunization of an estimated 12 million youngsters —reducing measles-susceptible population by about 40 per cent—there are more than 12 million left, Dr. Warren said.

Between 2 and 4 million of these will have to be immunized to accomplish measles eradication, he said, "if we pick the right children." The "right children" are those living in lower socioeconomic areas, to some extent those in rural areas, and the young school-age susceptibles. "In most areas, we'll be on the verge of eradication a year from now," he said. "There may be pockets of measles cases where all concerned haven't done enough."

A key factor in eradicating measles is the cooperation of practicing physicians, CDC Chief Sencer emphasized. Physicians should include measles immunization in their private practices and help educate parents to the seriousness of the disease.

The annual death rate attributed to measles continues to average more than 400 in recent years, Dr. Sencer said. If the ratio of cases to fatalities holds, however, final figures for 1965 may show a decline in deaths to about 240.

Some children react to the "live" vaccines being used, but this has been "greatly overplayed," Dr. Sencer said. "Children tolerate measles vaccine very well." About 15 per cent of those receiving two types of live attenuated measles vaccines may experience rather high fever, beginning about the sixth day after vaccination, and lasting no longer than five days. One vaccine type (Edmonston strain), "may have about twice this frequency of such responses," the PHS Advisory Committee statement said, but continued, "the great majority of reports indicate that even children with high fever experience relatively little discomfort . . . and reactions often go unnoticed by the parents.

Because most adults have had measles, there has been little vaccination of older persons, except in relatively isolated areas where few adults have been exposed to the disease. Limited data, the PHS said, "indicate that in the adult, reactions to vaccine are no more common than in children."

To come closer to eradication of measles in this country, said Dr. Warren, these three things must be done:

—As many pre-school children as possible must be immunized.

—Efforts should increase to immunize school children, whether there is a measles epidemic or not.

—Epidemics should not be tolerated.

Some persons should not receive measles vaccine, or should postpone immunization, he said. These include pregnant women, victims of tuberculosis, leukemia, lymphomas and other generalized malignancies, and persons who are hypersensitive to vaccine components or have recently received other live-virus vaccines.

Fight Quackery at the Local Level!

As long ago as 1847, the American Medical Association recommended that "physicians . . . bear emphatic testimony against quackery in all its forms." Periodically in the 119 years since then, the AMA, the state medical societies, the county medical societies and practically every other medical group have inveighed against quacks, but very little has been done to cut them off at the pockets. The Food and Drug Administration carries on a running battle, but the resources of the FDA are too slight and too committed to other tasks to suppress medical quackery effectively.

Anti-quack procedures must be instituted by county medical societies. In each community the entire gamut of quack operations must be exposed —from the chiropractor, through the electronic diagnoser with the miraculous machine, to the raw-food nut. Only the bright light of truth can wither the crook who depends on ignorance for his success. That truth must be spread in each community by doctors who have earned the trust and respect of their fellow citizens.

Press releases, discussion programs, personal appearances—all the technics of opinion-forming must be utilized. In this crusade against the witch doctors in suede shoes, there is no room for retreat to dignity or reticence. Failure to react to the challenge of the quacks may sometimes be interpreted as tacit approval of their statements; more than one has "proved" the truth of his claim by citing the failure of the medical profession to deny it.

—From an editorial by D. N. Goldstein, M.D., in THE WISCONSIN MEDICAL JOURNAL, **65**:217, (June) 1966.

Iowa Association of Medical Assistants

1966 Annual Meeting

"Within the scope of her duties, the medical assistant shall render to her employing physician and his patients, service to the fullest extent of her ability. She shall not reveal confidences of any patients, physicians or other members of the medical profession. She shall continually strive to improve her knowledge and skills in order to better serve her physician employer and his patients. She shall uphold the dignity and honor of the profession, and she shall accept the self-imposed disciplines thereof. She shall conduct herself at all times in such a manner as not to reflect any legal or ethical reproach toward her employer."

This code of ethics prefaced the 1966 IAMA BULLETIN distributed just prior to our recent annual meeting in Des Moines. It serves as a reminder to each of us of our purposes as medical assistants and of our obligations to ourselves and our employers.

The Des Moines chapter members were very gracious hostesses, and the convention was excellent in all its aspects. Our glimpse into the "Fantastic World" of Medicine, Electronics and Medicare helped us to prepare for the larger view looming in our future.

At the conclusion of the Sunday Brunch on May 15, our 1966-67 officers were installed by Mrs. Marian Little of Cedar Rapids.

PRESIDENT: Mrs. Gladys Barber, of Cedar Rapids, is receptionist, secretary and bookkeeper for Dr. Keith Woodhouse, a position she has held for 10 years. Previous to becoming a medical assistant she was credit manager for a Cedar Rapids department store for six years. She has served the Linn County chapter as treasurer, chairman of its Civic, Publicity and Finance Committees, and was treasurer of the 1964 IAMA convention held in Cedar Rapids. Her hobbies are her children and grandchildren, and her work in Eastern Star.

PRESIDENT-ELECT: Mrs. Dorla Sansom is a charter member of the Des Moines chapter and has served as its president, and chairman of its Program and Membership Committees. She has served IAMA as recording secretary, vice-president, and Program chairman for the 1966 convention. She has been employed, since 1952, in the offices of Drs. Hughes, Moore and Rinderknecht as office manager. She and her husband have one child—a teen-age daughter. Her hobbies are knitting, dancing, bridge and cooking.

Mrs. Barber

VICE PRESIDENT: Mrs. Jeanne Green, of Davenport, has been a medical assistant for 20 years, the past 17 serving as secretary and medical assistant to Dr. James Bishop. She is a charter member and first president of the Scott County chapter. Her IAMA duties have included two years as recording secretary and working as a member of the Newsletter and Membership Committees. She has continued to serve the Scott County chapter as leader of its Blue Cross/Blue Shield group, and keeps a medical assistant employment registry for Scott County physicians in cooperation with the Iowa State Employment Service.

RECORDING SECRETARY: Mrs. Juanita Mains, of Des Moines, was born in Kansas City, Missouri, attended school in Kansas City and was graduated from Shawnee Mission High School, in Kansas. She attended Kansas State Teachers Col-

lege for one year and a secretarial school in Kansas City for one year. Before World War II she was a secretary in the offices of Iowa Home Mutual Insurance Company, and during the War she was secretary to the executive secretary of the Kaiser Ship Yards, in California. She has been a medical assistant since 1956 in the office of Dr. H. G. Ellis, where her duties are those of a general medical assistant and secretary. She was 1966 co-chairman of the IMS Coffee Bar Committee for IAMA, was secretary of the Des Moines chapter this past year, and is currently president-elect of that chapter. She and her husband have one daughter—a stewardess with United Airlines based in California. Her hobbies are poodles and knitting.

TREASURER: JoAnn James, of Mason City, graduated from Mason City Junior College's medical secretary course and completed a secretarial course at the Hamilton Business College in Mason City. She has been employed in the office of Dr. L. C. Orton for three years. She is currently president-elect of the Mason City chapter, and has served as its secretary.

The appointive officers are Mrs. Maria Bakke, Cedar Rapids, corresponding secretary; Mrs. Barbara Smith, Cedar Rapids, historian; and Miss Margaret Hansen, Davenport, re-appointed parliamentarian.

Wisconsin's Plan For Treating Alcoholics*

In Wisconsin an effective referral and treatment program has evoked an increasing recognition of the disease concept of alcoholism from the public at large. There are eight Alcoholism Information Centers or Councils on Alcoholism, and last year the Wisconsin State Department of Public Welfare established the State Alcoholism Services Office, and it began rendering services to the entire state. The Winnebago State Hospital inaugurated an alcoholism treatment center late in 1965. The treatment center at Mendota State Hospital, Madison, has noticed a sharp increase in patient referrals. Interested citizens have formed the Wisconsin Alcoholism Association, Inc., to assist the alcoholism programs.

The Alcoholism Information Centers usually refer patients to professional agencies for the necessary physical, psychological/psychiatric and social rehabilitation. Private practitioners of medicine, lacking time to do such work themselves, usually do likewise.

Besides treatment for the patient, there is a concentrated effort to aid the patient's family.

* Schuh, T. J.: Referral of alcohol dependent patient. WISCONSIN MEDICAL JOURNAL, **65**:220-221, (June) 1966.

Mrs. Cloy Kent, of Iowa City, posed beside her oil painting of the late Dr. Walter L. Bierring, in the Bierring Memorial Room at the new headquarters office of the Iowa Medical Society.

MINUTES OF THE 1966 SESSIONS OF THE HOUSE OF DELEGATES

Iowa Medical Society
Des Moines, Iowa—April 24-27, 1966

(Alphabetical Index to the Minutes Can Be Found on page 763)

SUNDAY SESSION, APRIL 24, 1966

The House of Delegates of the Iowa Medical Society was called to order by the speaker, Dr. Paul M. Kersten, of Fort Dodge, at 9:00 a.m., Sunday, April 24. The House of Delegates approved the taking of attendance by signed registration cards. There were 106 delegates, 11 voting alternates and 19 ex-officio members present.

County	*Delegate*	*Alternate*
Adair		
Adams	A. W. Brunk	
Allamakee	M. F. Kiesau	
Appanoose	E. A. Larsen	
Audubon		
Benton	N. C. Knosp	
Black Hawk		G. D. Phelps
	F. G. Loomis	
	C. D. Ellyson	
		G. W. Heine
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan	P. J. Leehey	
Buena Vista	T. E. Shea	
Butler	F. A. Rolfs	
Calhoun		
Carroll	H. L. Skinner	
Cass		
Cedar		
Cerro Gordo	L. C. Orton	
	W. N. Hanson	
	L. J. Kirkham	
Cherokee		
Chickasaw		
Clarke	G. I. Armitage	
Clay		
Clayton		
Clinton	M. E. Barrent	
	W. H. Ash	
Crawford	R. A. Huber	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	J. R. Scheibe	
Decatur-Ringgold	E. E. Gamet	
Delaware	J. E. Tyrrell	
Des Moines	J. L. Saar, Jr.	
Dickinson	D. F. Rodawig, Jr.	
Dubuque	K. K. Hazlet	
	D. A. Howell	
Emmet	H. A. Lindholm	
Fayette	R. S. Jaggard	
Floyd	C. L. Kelly, Jr.	
Franklin	R. E. Munns	
Fremont		
Greene		
Grundy	D. D. Preuss	
Hamilton	G. A. Paschal	
Hancock-Winnebago	L. R. Fuller	
	S. M. Haugland	
Hardin	John Sear	
Harrison		
Henry	H. M. Readinger	
Howard	D. O. Maland	
Humboldt	Beryl Michaelson	
Ida	J. B. Dressler	
Iowa		
Jackson		
Jasper	J. W. Billingsley	
Jefferson	J. N. Morgan	
Johnson	K. R. Cross	
		Michael Bonfiglio
	J. M. Layton	
	P. A. McLaughlin	
	C. E. Schrock	
	P. M. Seebohm	
		G. R. Zimmerman
	C. E. Radcliffe	
		G. M. Wyatt
Jones	L. D. Caraway	
Keokuk		
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
	W. J. Robb	
	R. A. Sautter	
	C. R. Aschoff	
Louisa		
Lucas		
Lyon		
Madison		
Mahaska	G. W. Bennett	
Marion	G. K. Van Zee	
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills		M. L. Scheffel
Mitchell		
Monona		
Monroe		
Montgomery	Oscar Alden	
Muscatine		J. H. Spencer
O'Brien		I. E. Brown
Osceola	F. B. O'Leary	
Page		G. H. Powers
Palo Alto		
Plymouth	J. P. Trotzig	
Pocahontas	C. J. Smith	
Polk	W. R. Hornaday, Jr.	
		P. K. Hughes
	R. W. Anderson	
	R. B. Stickler	
		L. J. Galinsky
	John Uchiyama	
	A. N. Smith	
	J. H. Kelley	
	M. E. Alberts	
	N. W. Irving, Jr.	
	Wallace Rindskopf	
	L. O. Ely	
	J. G. Thomsen	
Pottawattamie	Hormoz Rassekh	
	I. J. Hanssmann	
	U. J. Collignon	
Poweshiek	H. R. Light	
Sac	C. D. Gibson	
Scott	Erling Larson	
	W. D. Edgerton	
	R. P. Lagoni	
	J. F. Bishop	
Shelby	J. H. Spearing	
Sioux	T. E. Kiernan	
Story	G. E. Montgomery	
	R. H. Heise	
Tama	A. J. Havlik	
Union-Taylor	R. H. Kuhl	
	R. W. Boulden	
Van Buren		
Wapello	R. A. Hastings	
Warren	amalgamated with Polk County	
Washington	G. E. Montgomery	
Wayne	K. A. Garber	
Webster	H. H. Kersten	
	L. J. O'Brien	
Winneshiek		
Woodbury	P. M. Cmeyla	
	W. P. Davey	
	C. L. Beye	
Worth	B. H. Osten	
Wright	C. P. Hawkins	

LIAISON DELEGATES

R. C. Larimer C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

F. G. Ober
S. P. Leinbach
J. M. Rhodes
R. F. Birge
V. L. Schlaser
C. W. Seibert
J. H. Sunderbruch
K. E. Lister
R. L. Wicks
C. N. Cooper
L. W. Swanson
H. J. Smith
E. M. Smith
P. M. Kersten
R. C. Hardin
O. D. Wolfe
C. V. Edwards, Sr.
G. H. Scanlon
E. F. Van Epps

Minutes of the April 14, 1965, meeting of the House of Delegates were approved as published in the July, 1965, JOURNAL OF THE IOWA MEDICAL SOCIETY.

The Speaker of the House of Delegates introduced physicians who were serving in the House for the first time, and also the individuals who were seated at the head table. He announced reference committee appointments.

Reports as published in the 1966 HANDBOOK FOR THE HOUSE OF DELEGATES were approved excepting for the report of the Publications Committee, which was referred to the Reference Committee on Reports of Officers.

The four resolutions that had been published in the HANDBOOK beginning at page 68, were excluded, since they were to be presented at a later time under the heading of "New Business."

(The following are reports previously published in the DELEGATES' HANDBOOK.)

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

The duties of this office include maintaining membership and dues records; conducting the official correspondence; and notifying members of meetings, officers of their election, and committee members of their appointment and duties. The secretary is also responsible for preparing minutes of all official meetings of the Society. Insofar as is in his power, he uses the printed matter, correspondence and influence of his office to aid the councilors in organizing and improving the component societies, and in extending the power and usefulness of the Society.

The following paragraphs point up some of the more important activities of the office of the secretary:

1966 ANNUAL MEETING

The Program Committee has completed the program for the 1966 annual meeting, and it has appeared in the March issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY. A special feature will be the first statewide Medical/Legal Symposium, scheduled for Tuesday afternoon, April 26, at which members of the Iowa Bar Association will be guests of the IMS. The office has cooperated with district councilors in organizing their caucuses, in preparation for the annual meeting, including organization of the Nominating Committee.

HOUSE OF DELEGATES

Proceedings of the 1965 sessions of the House of Delegates were published in the July, 1965, JOURNAL. The usual administrative procedures in connection with the House of Delegates directives have occurred. As a part of the 1966 annual meeting, the House of Delegates will hold its first session on Sunday, April 24, at 9 a.m. Reference committee hearings will begin as soon as possible on Sunday following adjournment of the House. The final session of the House of Delegates will begin at 8 a.m. on Wednesday, April 27. All sessions of the House of Delegates will be held at the Savery Hotel.

EXECUTIVE COUNCIL

Five meetings of this interim policy-making body have been held since the 1965 annual meeting, and a sixth session is scheduled for March 17. Progress reports from important committees of the Society were presented to the Executive Council for its action in some instances, and for its information in others. These committees will report to the House of Delegates.

JUDICIAL COUNCIL

The Judicial Council has held regular meetings, at three-month intervals. A final meeting is scheduled for March 16. The chairman, Dr. W. M. Krigsten, has written a report that appears elsewhere in this booklet. The principal responsibilities of the Judicial Council are to approve applications for IMS membership, and to decide various questions relating to membership or ethics, and on occasion, to discipline members of the Society.

COMMITTEES

The Society has 50 standing and special committees, most of which have met at least once during the year. Reports covering the activities of these groups appear elsewhere in this HANDBOOK, or will be presented as oral reports at the first session of the House of Delegates in April. Sixty-five official committee meetings have been held, and prior to the annual meeting there will be numerous additional ones. These totals do not include informal meetings of committee members, or telephone conferences.

LIAISON WITH COUNTY MEDICAL SOCIETIES

The Fall Conference for County Medical Society Officers and Other Representatives was held on Sunday, September 26, 1965, with approximately 180 physicians and guests in attendance. Dr. Frank Ober, the IMS president, opened the meeting by presenting a detailed report on current projects and activities, and the remainder of the morning program consisted of presentations planned by the Iowa Medical Political Action Committee. Nationally prominent speakers from the U. S. Congress, the AMA, and the U. S. Chamber of Commerce discussed pertinent topics. The afternoon session was devoted to the first statewide Conference on Medicine and Pharmacy. Approximately 100 pharmacists joined IMS representatives to hear and participate in a discussion concerning the ethical and legal responsibilities of physicians and pharmacists.

On Sunday, February 6, 1966, over 300 Society members and guests attended a special briefing on Public Law 89-97—the Medicare Law. At that conference, representatives from the Department of Health, Education and Welfare, the AMA, the State Department of Health, the State Department of Social Welfare, the IMS, Blue Cross and Blue Shield, and the Health Insurance Council presented up-to-date information concerning the implementation and administration of the Medicare Law. A report on the application of the IMS

usual and customary fee survey was also provided. A summary of the addresses has been published in the March JOURNAL.

FIELD SERVICE

The Society's field secretary, Mr. Gerald Buckles, has been active during the past year in visiting county medical societies and individual doctors throughout the state, as well as other organizations, to promote numerous intraprofessional projects, and projects "in the public interest."

MAILINGS

Mailings during the year included: General News Bulletins, 8; Legislative Bulletins, 2; Legislative Contact Men letters, 1; "In the Public Interest" articles to members of the Iowa Legislature, Iowa's Congressional delegation in Washington, and all news outlets, 12; Deputy Councilor Newsletters, 5; and special mailings and reports to county medical society officers and other representatives, 5.

NATIONAL, REGIONAL, STATE CONFERENCES

Following is a list of some of the major conferences and meetings at which the IMS was represented: AMA Annual and Clinical Meetings; Special Meeting of the AMA House of Delegates; AMA Congress on Environmental Health; AMA Public Relations Institute; AMA 10th National Conference on Physicians and Schools; AMA Congress on Occupational Health; AMA Conference on Disaster Medical Care; AMA National Symposium on Venereal Disease; AMA Medical Service Conference; AMA Conference on Federal Medical Assistance Programs; AMA Conference on Medical Education; AMA Conference on Rural Health; AMA Legal Conference for Medical Society Representatives; MSEA Institutes and Seminars; Institute on Nursing Home Care; State Medical Journal Conference; 4th International Conference on Alcohol and Traffic Safety; Governor's Conference on Economic Opportunity; Iowa Welfare Association Annual Meeting; North Central Medical Conference; Regional Health Insurance Council Meeting; Institute on Home Care of the Physically Handicapped-Mentally Retarded Child; Advisory Committee, Health Referral Service; Iowa Interprofessional Association; Partners of Alliance Program; Iowa Nursing Home Association Annual Meeting; Iowa Youthpower Conference; Iowa Educational Conference; Conference of Organization of State Medical Society Presidents; National Conference on Community Health Programs; National Voluntary Health Conference; Iowa Society of Association Executives meetings; Annual Meeting of Hospital Service Inc. of Iowa; Annual Meeting of Iowa Medical Service; District X Blue Shield Conference; National Congress on Mental Health; Diet Therapy Conference; Governor's Conference on Physical Fitness; Annual Meeting, IAGP; AMA Conference on Blood Banking; AMPAC Conference; and AMA Conference on Medical Ethics and Professionalism.

IOWA REPRESENTATION AT NATIONAL LEVEL

The Society has maintained its close liaison with the AMA and other national organizations. The IMS is represented in the AMA as follows:

Doctor Donovan F. Ward, of Dubuque, immediate past president of the AMA, and member, AMA Board of Trustees, AMA Advisory Committee to the HEW Department, and Technical Advisory Committee to HEW on Administrative Agents;

Doctor S. P. Leinbach, of Belmond, member of the AMA Council on Rural Health;

Doctor D. C. Conzett, of Dubuque, member of the Committee on Federal Medical Services;

Doctor John G. Thomsen, of Des Moines, Chairman of the AMA Committee on Quackery;

Doctor E. M. Smith, of Des Moines, member of the Technical Advisory Committee to HEW on Provider Participation.

Four IMS staff members are active in the National Association of Medical Society Executives. Mr. Donald L. Taylor, the IMS executive vice-president, is a past-president of the National Association, and has served on its Board of Directors, its Nominating Committee and several others of its committees. He has also been a speaker at several study seminars sponsored by the Association. Miss Tina Preftakes, assistant to the IMS executive vice-president, is a member of the Editorial Board of THE EXECUTIVE, the house organ of the national organization.

SERVICES TO THE WOMAN'S AUXILIARY

The Woman's Auxiliary to the IMS utilizes the services and facilities of the Society's headquarters office in implementing its projects. The bulk of this work is handled by Mrs. Hazel Lammey, an executive assistant who is staff secretary to the Auxiliary. The staff assists the Woman's Auxiliary in arranging its annual meetings, preparing its annual reports, and maintaining its membership records and roster, as well as preparing and issuing the WOMAN'S AUXILIARY NEWS.

IMS MEMBERSHIPS

Memberships in the Iowa Medical Society during the year 1965 totaled 2,465 as compared to 2,456 for the preceding year. There were 69 counties (in 65 single or two-county societies) in which 100 per cent of County Society members held membership in the IMS. The number of eligible non-members increased by six for a total of 57 for 1965. The number of ineligible non-members remained at 51 for 1965. Physicians retired or not in practice decreased from 66 in 1964 to 59 in 1965. The total membership percentage in 1965 remains at 98.

COUNTY SOCIETIES HAVING 100 PER CENT MEMBERSHIP IN IMS IN 1965

Adair	Greene	Monona
Adams	Grundy	Monroe
Allamakee	Hamilton	Montgomery
Appanoose	Hancock-Winnebago	Muscatine
Audubon	Hardin	Osceola
Benton	Henry	Page
Black Hawk	Howard	Palo Alto
Boone	Humboldt	Plymouth
Buchanan	Ida	Pocahontas
Butler	Iowa	Pottawattamie
Cerro Gordo	Jackson	Sac
Chickasaw	Jasper	Shelby
Clarke	Jefferson	Sioux
Clay	Kossuth	Tama
Crawford	Lee	Union-Taylor
Dallas-Guthrie	Lucas	Van Buren
Davis	Lyon	Wapello
Decatur-Ringgold	Madison	Washington
Delaware	Mahaska	Wayne
Dickinson	Marshall	Webster
Floyd	Mills	Winneshiek
Franklin		Wright

1965 IMS MEMBERSHIP RECORD

County	Active Members	Associate Members	Resident Members on Resident License	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage
Adair	3	1	..	..	..	..	100
Adams	4	..	..	..	..	..	100
Allamakee	8	..	..	..	..	..	100
Appanoose	10	1	..	..	..	1	100
Audubon	3	..	..	..	..	..	100
Benton	13	..	..	..	..	..	100
Black Hawk	126	1	..	..	..	1	100
Boone	16	..	..	..	..	..	100
Bremer	16	..	..	1	..	..	94
Buchanan	22	..	..	..	6	..	100
Buena Vista	11	..	..	..	..	..	92
Butler	8	..	..	..	..	..	100
Calhoun	13	..	..	2	..	1	87
Carroll	21	1	..	1	..	1	96
Cass	10	..	..	1	..	..	91
Cedar	8	..	..	1	..	..	89
Cerro Gordo	71	1	..	..	..	..	100
Cherokee	21	..	..	1	11	1	95
Chickasaw	9	..	..	..	..	..	100
Clarke	5	..	..	..	..	..	100
Clay	14	..	..	..	..	..	100
Clayton	9	1	..	1	..	..	91
Clinton	43	2	..	3	2	..	94
Crawford	8	..	..	..	..	..	100
Dallas-Guthrie	25	..	..	..	4	..	100
Davis	12	..	..	..	..	..	100
Decatur-Ringgold	7	..	..	..	..	2	100
Delaware	10	..	..	..	..	1	100
Des Moines	46	2	..	2	..	..	96
Dickinson	6	2	..	..	..	..	100
Dubuque	66	3	..	3	..	..	95
Emmet	10	..	..	1	..	1	91
Fayette	17	..	..	3	..	1	85
Floyd	18	..	..	..	..	..	100
Franklin	6	..	..	..	..	..	100
Fremont	3	..	..	1	..	..	75
Greene	11	..	..	..	..	..	100
Grundy	7	..	..	..	..	..	100
Hamilton	10	..	..	..	1	..	100
Hancock-Winnebago	14	..	..	..	1	1	100
Hardin	15	..	..	..	..	..	100
Harrison	7	..	..	1	..	3	88
Henry	20	..	..	..	4	2	100
Howard	8	..	..	..	..	..	100
Humboldt	7	..	..	..	..	..	100
Ida	5	..	..	..	..	2	100
Iowa	13	..	..	..	..	..	100
Jackson	11	..	..	..	..	..	100
Jasper	22	..	..	..	..	..	100
Jefferson	11	..	..	..	..	1	100
Johnson	247	2	..	7	..	1	97
Jones	10	..	..	1	..	1	91
Keokuk	4	..	..	1	..	..	86
Kossuth	11	..	..	..	..	..	100
Lee	39	..	..	..	..	..	100
Linn	138	6	..	5	..	2	96
Louisa	2	..	..	1	..	..	75
Lucas	7	..	..	..	..	..	100
Lyon	6	..	..	..	..	..	100
Madison	5	..	..	..	..	..	100
Mahaska	19	1	..	..	..	..	100
Marion	15	..	..	3	8	1	83
Marshall	39	..	..	..	..	..	100
Mills	6	..	..	..	3	2	100
Mitchell	11	..	..	1	..	1	92
Monona	10	..	..	..	..	1	100
Monroe	4	..	..	..	..	..	100
Montgomery	11	..	..	..	..	..	100
Muscatine	19	1	..	..	1	1	100
O'Brien	10	..	..	1	..	..	91
Osceola	3	..	..	..	..	..	100
Page	19	..	..	..	9	1	100
Palo Alto	9	..	..	..	..	..	100
Plymouth	12	..	..	..	..	..	100
Pocahontas	7	..	..	..	..	1	100
Polk	334	19	3	2	1	20	99
Pottawattamie	70	..	..	..	..	..	100
Poweshiek	10	..	..	1	..	..	91
Sac	7	..	..	..	..	..	100
Scott	106	..	..	1	..	2	99
Shelby	8	..	..	..	..	2	100
Sioux	14	..	..	..	..	1	100
Story	51	1	..	2	..	1	94
Tama	10	..	..	..	..	..	100
Union-Taylor	14	1	..	..	..	..	100
Van Buren	3	..	..	..	..	..	100
Wapello	44	1	..	..	..	..	100
Warren amalgamated with Polk							
Washington	12	..	..	..	..	..	100
Wayne	3	2	..	..	..	..	100
Webster	57	..	..	..	..	2	100
Winneshiek	9	..	..	..	..	..	100
Woodbury	113	3	..	7	..	1	97
Worth	4	..	..	1	..	..	80
Wright	19	..	..	..	..	..	100
	2,410	52	3	57	51	59	98

AMA MEMBERSHIP

The members of the Iowa Medical Society who were active members of the American Medical Association in 1965 numbered 2,351 (including active dues-exempt because of life membership, residency or military service). In addition, 52 held associate memberships, eight held service memberships (in Veterans Administration) and three held resident membership (members on temporary or resident licenses) in the AMA.

The 2,351 active AMA memberships in 1965 entitled Iowa to three AMA delegates. The 1965 AMA membership was 97.6 per cent of the total Iowa Medical Society membership.

R. F. BIRGE, M.D., *Secretary*

REPORT OF THE TREASURER

During the past calendar year (1965) the income of the Iowa Medical Society exceeded expenses by $51,605.55. The dues increase effective in 1965 enabled the IMS to meet its financial obligation without deficit financing for current expenses and also to utilize approximately $20 per member from 1965 dues for partial financing of the new headquarters building.

The following financial statements set forth the fiscal status of the IMS as of December 31, 1965.

IOMA MEDICAL SOCIETY

Balance Sheet—December 31, 1965

ASSETS

Current Assets:	
IMS Checking Accounts	$ 2,727.29
Government Bonds	5,000.00
Medicare	5,000.00
Notes Receivable (Baldridge-Beye)	1,250.00
Pension and Disability Insurance Due From Employees	1,402.64
Cash Value of Life Insurance	504.30
Total Current Assets	$ 15,884.23
Fixed Assets:	
Land	$ 77,500.00
Building (Depreciated Value)	17,275.85
WDM Building	257,413.99
Net Fixed Assets	$352,189.84
TOTAL ASSETS	$368,074.07

LIABILITIES AND NET WORTH

Liabilities:		
Mortgage Payable		$193,000.00
Accrued—Personal and Property Tax		2,642.09
Accrued—Interest		1,721.03
Deferred Compensation		504.30
Baldridge-Beye Memorial Fund:		
Notes 12-31-65		1.250.00
Total Liabilities		$199,117.42
Net Worth:		
Balance 1-1-65	$117,351.10	
Add: Net Excess of Income Over Expenses 1965	51,605.55	
Balance Net Worth		$168,956.65
TOTAL LIABILITIES AND NET WORTH		$368,074.07

IOWA MEDICAL SOCIETY
STATEMENT OF INCOME AND EXPENSES

For the Year Ended December 31, 1965

Income for the Year 1965:	
Dues—State Society	$270,735.00
Interest on Investments	2,206.00
Medicare	1,350.77
Miscellaneous	450.07
AMA Collection Commission	946.12
TOTAL INCOME	$275,687.96
Expenses for the Year 1965:	
Annual Session (Net)	$ 1,016.35
Council Expense	2,285.93
County Society Services	4,097.21
Dues and Subscriptions	1,405.70
General Administrative Expense	1,482.48
Insurance	3,056.37
Interest Expense	1,721.03
Journal (Net)	20,131.53
Legal Expense	5,747.16
Lights, Gas and Water	1,135.79
Office Furniture and Fixtures	230.83
Office Stationery and Supplies	3,791.47
Pension and Disability Insurance	4,818.71
Postage	4,534.29
Repairs and Maintenance	1,689.38
Salaries	88,640.99
Service Contracts—Machines	745.00
Taxes:	
Personal and Property	2,400.00
Social Security	2,347.14
Unemployment—Federal	188.91
Unemployment—State	70.83
Use Tax	620.13
Telephone and Telegraph	7,439.56
Travel—Officer	11,820.85
Travel—Salaried Employee	13,317.88
Trustee Expense	3,252.22
Woman's Auxiliary	1,452.03
Committee Expense	36,675.34
TOTAL EXPENSE	$224,082.41
Net Excess of Income Over Expenses for 1965	$ 51,605.55

V. L. SCHLASER, M.D., *Treasurer*

BOARD OF TRUSTEES

A comprehensive report on activities of the Board of Trustees will be presented at the first session of the House of Delegates in April. It will include information on the dedication of the new Society headquarters office building at 1001 Grand Avenue, West Des Moines; relations with Blue Shield, and the Iowa Medical Foundation; Society activities in connection with implementation of P.L. 89-97; and all other pertinent projects.

Delegates and alternates should thoroughly review the reports incorporated in this HANDBOOK, and especially those of the secretary and the treasurer. As a part of its supplemental report, the Board of Trustees will discuss all of the fiscal affairs of the IMS.

C. W. SEIBERT, M.D., *Chairman*

JUDICIAL COUNCIL

At the Judicial Council's organizational meeting on April 14, 1965, following the adjournment of the House of Delegates, Dr. E. A. Larsen, of Centerville, succeeded Dr. K. E. Lister, of Ottumwa, after Dr. Lister resigned to become a member of the Board of Trustees. Dr. W. M. Krigsten, of Sioux City, was elected chairman of the Council, and Dr. J. F. Paulson, of Mason City, was reelected as its secretary.

During its quarterly meetings in June and September, 1965, and January, 1966, the Council has dealt with a variety of problems. It conferred with Dr. J. M. Rhodes, on two occasions, regarding operation of the evaluation and enrollment program for osteopathic physicians and surgeons. It passed upon the admission of a number of applicants for IMS membership, and it dealt with other matters too numerous to mention here.

The Reference Committee on Legislation and Medical Service had requested the Council to consider the factors involved in contracts between hospitals and physicians raised by Resolution No. 10 (Scott County Medical Society) and Resolution No. 18 (Webster County Medical Society), at the 1965 annual meeting, and to submit an opinion on the subject for the guidance of the IMS delegates to the AMA. The councilors were of the opinion that the specific issues raised in the resolutions should be resolved at the local level, and they instructed the IMS delegates to the AMA to continue advocating the separation of radiology, anesthesiology, physiatry and pathology from hospital services, as current Iowa law requires.

Regarding the Blue Cross practice of requesting complete hospital records of patients whose bills it has been asked to pay, the Council determined (A) that there are instances in which Blue Cross needs more information than is furnished on the claim form; (B) that its requests necessitate the doctors' doing nothing unethical; and (C) that in each instance it is content with an abstract, rather than a photocopy. The Council then made the following recommendations: (1) Initially, Blue Cross should request no more than the answers to some specific questions, and thereafter it should ask for abstracts of records, rather than photocopies. (2) Each hospital staff should establish procedures for (a) notifying the attending physician whenever Blue Cross has requested additional data, and (b) approving supplemental information that is to be sent to Blue Cross.

Several disagreements between pharmacists and physicians were brought to the Council's attention. One of them concerned the operation of the drug room at a county hospital that was under the nominal

supervision of an out-of-town pharmacist. The councilor for that district advised the medical staff there to put a local pharmacist in charge, and he cautioned the individual doctors to refrain from authorizing purchases from the drug room by outpatients, and to restrict the amounts provided to patients about to be discharged from the hospital. In another instance, the investigating councilor found that there was complete disagreement, as regards the facts, between the complaining pharmacist and the physicians complained against, and he asked the pharmacist to submit either evidence or affadavits to support his contention.

Subsequently, at a meeting between the IMS Interprofessional Activities Committee and a deputation from the Iowa Pharmaceutical Association, it was agreed that the IPhA thereafter should screen all complaints by its members, and should submit documents in any cases sent to the IMS for referral to the Judicial Council.

The councilors' attention had been called to the unfortunate publicity occasioned by a JAMA article written by Dr. R. C. Derbyshire, of Phoenix, president of the Federation of State Licensure Boards of the United States, calling upon the medical profession to take action to suspend the practice rights of incompetent physicians. It was pointed out to the Council that publicity is inescapable whenever doctors communicate with one another on such subjects by means of the printed word, and that the Derbyshire article was no more than the first of a score or more of such papers that the AMA has requested from physicians throughout the country, presumably for publication in JAMA.

The AMA is to hold a Congress on Medical Ethics in Chicago, March 5-6, at which the IMS Judicial Council will be represented, and at which the AMA's objectives in this area will doubtless be clarified.

W. M. KRIGSTEN, M.D., *Chairman*

Reports of Standing Committees

COMMITTEE ON LEGISLATION

As is customary, the report of the Committee on Legislation will be divided into two parts—National Legislation and State Legislation.

NATIONAL LEGISLATION

The first session of the 89th U. S. Congress adjourned in late October, 1965. Approximately 950 bills had been introduced which affected medicine, medical care or the public health. During the first session of the 89th Congress, the American Medical Association offered its views on various pieces of legislation, including the drug abuse control amendments of 1965, the health research facilities amendments, the Social Security amendments of 1965 (Medicare), the regional research and treatment centers for heart disease, cancer and stroke, and a number of other bills that were of interest to the medical profession. The Committee on Legislation coordinated its efforts with those of the AMA in communicating organized medicine's position on specific health legislation to the Iowa Congressional delegation.

The AMA vigorously opposed the Medicare provisions of HR 6675 and the provisions which brought self-employed physicians under the compulsory portion of the Social Security Act. Since the results of this legislation have been reported to the membership by various means, they will not be discussed in detail in this report.

The two most important pieces of health legislation passed by the first session of the 89th Congress were the Medicare Law and the Heart Disease, Cancer and Stroke Law. Through the various committees of the IMS, regulations drafted to implement those laws have been closely scrutinized, and the Society's comments have been offered whenever necessary. More detailed information on the implementation of both pieces of legislation will be found in the reports of other committees.

The second session of the 89th Congress convened on Monday, January 10, 1966. The Committee on Legislation will continue to maintain liaison with the Iowa Congressional delegation in Washington, in order that the views of the Iowa Medical Society on health legislation can be properly presented to the Iowa members of Congress.

STATE LEGISLATION

Shortly after the 1965 IMS Annual Meeting, the longest regular session of the Iowa General Assembly adjourned. A complete report on the health matters that it considered was included in the "In the Public Interest" page in the July, 1965, JOURNAL OF THE IOWA MEDICAL SOCIETY.

The Committee on Legislation is now beginning preparations for the next regular session of the Iowa General Assembly, which will convene in January, 1967. Because of the passage of the Social Security Amendments of 1965, the Iowa General Assembly will be requested to enact legislation to implement Title XIX of the Social Security Act (grants to the states for medical assistance programs). Title XIX will bring drastic changes in existing state programs for the needy. The program took effect on January 1, 1966, but it cannot be implemented in Iowa until enabling legislation has been enacted by the General Assembly.

By July 1, 1967, every Title XIX program must include at least (1) inpatient hospital services, with the program paying the "reasonable cost"; (2) outpatient hospital services; (3) other laboratory and x-ray services; (4) skilled nursing-home services for individuals 21 years of age or older; and (5) physicians' services, whether furnished in the office, the patient's home, a hospital, a skilled nursing home or elsewhere.

After 1969, no federal matching funds for medical care of the needy will be available through other assistance programs. By 1975, all needy and medically needy, of all ages, are to have comprehensive care and services available through this program.

The major responsibility of the Committee on Legislation during the next session of the General Assembly will be to urge the enactment of the most favorable legislation possible to implement Title XIX. In cooperation with other IMS committees, the Committee on Legislation has already begun to assemble information that will serve as a basis for its efforts.

It is quite apparent that the medical profession needs to become increasingly concerned about candidates for election to the Iowa House and Senate. Proposals regarding health matters are growing increasingly numerous at the state level, and so much of our time and effort has been devoted to omnibus health legislation in the Congress that we perhaps have taken too lightly

our individual responsibilities in our state and in our respective counties.

Throughout the next few months, and up to the 1966 election, the IMS Committee on Legislation encourages physicians to take more and more interest in state legislation and in the candidates' views on health matters.

The Committee on Legislation wishes to acknowledge the efforts of county legislative contact men, who continue to play a most important role in implementing the legislative program of the Iowa Medical Society.

J. H. KELLEY, M.D., *Chairman*

NECROLOGY COMMITTEE

The following members of the Iowa Medical Society died during 1965:

	Age
Harold C. Black, Des Moines	69
Clyde A. Boice, Washington	88
Clyde R. Bradford, Des Moines	65
Thomas A. Burcham, Sr., Des Moines	82
Lloyd B. Calbreath, Humeston	86
Thomas R. Campbell, Sioux Rapids	78
Rollin M. Conley, Perry	65
Kenneth G. Cook, Fairfield	63
Boyd L. Ditto, Burlington	82
Evelyn H. Dulin, Iowa City	61
Albert J. Entringer, Dubuque	61
Charles H. Flynn, Cheyenne, Wyoming	58
Walter E. Foley, Sr., Davenport	73
John R. Gardner, Lisbon	89
William C. Goenne, Sr., Davenport	76
Sidney B. Goodenow, Colo	82
Lawrence J. Halpin, Cedar Rapids	55
George E. Harper, II, Fort Madison	59
Thomas J. Irish, Sr., Forest City	68
Harry D. Jarvis, Chariton	84
Michael F. Joynt, Marcus	82
Ellsworth L. Lindley, Cedar Rapids	52
Anthony W. Loes, Dubuque	84
Phillips E. Lohr, Churdan	58
John H. McCall, Allerton	82
Edward M. Mark, Clarksville	60
Alfred K. Meyer, Clinton	64
John R. Morrison, Des Moines	54
George C. Murphy, Waterloo	73
David M. Nyquist, Eldora	76
Claude O. Parks, Iowa City	78
Arthur E. Perley, Waterloo	72
Ralph E. Russell, Waterloo	77
Emery A. Rust, Webb	85
Yme Sloterdyk, Knoxville	39
Charles S. Stoakes, Lime Springs	88
James R. Thompson, Waterloo	82
Charles C. Walker, Des Moines	83
Edwin B. Walston, Jackson Heights, New York	96

COMMITTEE ON NURSING EDUCATION AND SERVICE

In July of 1965, the Iowa Medical Society was requested by the Iowa Nurses' Association to offer its support and assistance in implementing a retraining program for inactive nurses from funds provided by the federal Manpower Development and Training Act. This Committee recommended to the Board of Trustees that they support the program.

Following further exploration of this project, the Iowa Nurses' Association disbanded plans to develop a nurse retraining program under MDTA, and instead has developed a Professional Nurse Reorientation Project. The basic ultimate purpose of this project is to encourage and stimulate inactive nurses in the state to seek employment at the local level, thus helping to alleviate the demand for professionally trained nurses.

On February 10, 1966, the Iowa Medical Society was requested to give assistance to this program by encouraging nurses to take advantage of reorientation courses that will be scheduled throughout the state.

This project is now being considered by the Committee, and its recommendations will be referred to the Board of Trustees.

HOWARD G. ELLIS, M.D., *Chairman*

MEDICO-LEGAL COMMITTEE

No problems have been presented to the Medico-Legal Committee as of this date, so no meetings have been held.

F. E. THORNTON, M.D., *Chairman*

ARTICLES OF INCORPORATION AND BY-LAWS

This Committee has nothing to report at this time; however, if proposed amendments are brought to its attention prior to the Annual Meeting, they will be properly developed for presentation to the House of Delegates.

G. H. SCANLON, M.D., *Chairman*

COMMITTEE ON MEDICAL SERVICE

The status of the Medical-Hospital Statistical Project may be ascertained by referring to the report of the Medical-Hospital Statistical Subcommittee, which follows.

The IMS is attempting to stay abreast of the various rapidly-developing federal programs. To illustrate, a proposal for the development of a federally-funded counseling and referral program for men found to be medically unqualified for military service was forwarded to the Society by the State Department of Health during 1965. The Society was invited to review the proposal and to express its views concerning it. A subcommittee of the Committee on Medical Service considered the proposal that had been developed by the State Department of Health for submission to the U. S. Public Health Service. The several recommendations of the subcommittee were sustained by the IMS Executive Council. Among them were (1) that the Society should express its appreciation for the opportunity to review the proposal and to offer comments prior to its submission to the U.S.P.H.S.; (2) that the Society should support the basic objective of the program, in principle—that of rehabilitating Selective Service rejectees and by so doing to make them more useful citizens; (3) that it should express thoughtful reservations, since however laudable the purpose and however limited the participation by physicians, the program nevertheless would be another demand placed upon physicians by the government; (4) that the Society should recommend that every effort be made, if the program were authorized, to pay the usual and customary fee, as the physician billed it; and (5) that the IMS should neither endorse nor reject the proposal, but rather should suggest that the Health Department institute the program by work-

ing with physicians on an independent basis and with county medical societies in an effort to secure physicians who would be willing to see rejectees who do not have family physicians.

The Society is making an effort to keep informed on the medical service aspects of the numerous programs growing out of the Economic Opportunity Act. A Society representative has attended the several state-level briefing sessions at which the various titles of the EOA have been described. Of particular interest has been Operation Head Start for underprivileged preschool children. It had its inception in the summer of 1965, and plans are underway in some communities for similar programs this coming summer. The IMS has received and is answering requests from county medical societies for information about that program, so that they may determine their proper role at the local level.

In a recent issue of the IMS NEWS BULLETIN, attention was given to the availability of the "Tentative Standards and Guidelines for the Development and Evaluation of Health Activities Proposed for Funding Under the Community Action Program." That material has been requested by and sent to a number of member physicians.

The IMS was invited to participate in planning sessions which were held by the Black Hawk County Medical Society and the Employers Health Care Council of Black Hawk County in preparation for a "Forum on the Efficient Use of Health Care Resources." The Forum was held in October at Waterloo, and a report of it was included in the January, 1966, issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

The Iowa Medical Society continues to serve as fiscal agent for the Department of Defense in administering the Servicemen's Dependents' Medical Care Program, and has paid approximately $280,000 to Iowa physicians during the past 12 months.

G. G. YOUNG, M.D., *Chairman*

MEDICAL-HOSPITAL STATISTICAL SUBCOMMITTEE

Preparations for the Medical-Hospital Statistical Study were completed during the summer and fall of 1965, and the six-month study was launched in November. In the form of a pilot program, the project is to continue through April. It is a joint effort of the Iowa Medical Society and the Iowa Hospital Association. Four physicians comprise the Subcommittee, and, in turn, serve on the Joint Committee consisting of representatives of the IMS and the IHA.

The study will provide comprehensive information on patients discharged from the 27 participating hospitals. This information is now being gathered, and is being recorded by means of the Royal-McBee Keysort System. The System requires the hospitals to punch a card for each patient following his discharge. These cards do not identify the patient by name, but are punched in such a way as to provide a diversity of information, e.g., length of stay, diagnosis, age group, type of accommodation, type of pay, etc. The cards are submitted by the hospitals on a monthly basis, and they are then tabulated on Blue Cross data-processing equipment.

The tabulations will be reviewed and analyzed by the Joint Committee of the IMS and IHA. Refinements and comparisons of the data will be made whenever possible. It is hoped that some preliminary observations on the project may be developed in time for submission to the 1966 House of Delegates in the form of a supplemental report.

G. G. YOUNG, M.D., *Chairman*

COMMITTEE ON STATE DEPARTMENTS

Although it has not been necessary for the Committee on State Departments to have a formal meeting, a review of the reports of the Committee's six subcommittees will indicate that there has been considerable activity within each of their specific areas.

The Society has continued to maintain a close liaison with Dr. Arthur P. Long, commissioner of health, during the year, as well as with representatives of other appropriate state agencies. The Department of Health has distributed several useful printed items to members of the Society during the year. These have included "The Clinical Handbook on Economic Poisons" and the book THE CONTROL OF COMMUNICABLE DISEASES IN MAN.

During the past year, the Society has been represented by physicians at such national meetings in the area of public health as the AMA Symposium on Venereal Disease Control and the AMA Congress on Environmental Health Problems.

A. H. DOWNING, M.D., *Chairman*

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

The Subcommittee on Maternal and Child Health has considered the following subjects this year.

STATEWIDE TESTING FOR PKU

It was reported to the Subcommittee that approximately half of the state's newborn are presently being tested for PKU. Weak spots in the testing program apparently exist among the small and more rural hospitals. The Subcommittee is in general agreement that education of physicians will do more than anything else to make the performance of this test a routine measure. To that end, Dr. Madelene Donnelly, a member of the Subcommittee and the director of the Division of Maternal and Child Health in the State Health Department, is assembling a kit of materials for distribution to all physicians in the state. The kit will contain information about the relative ease with which a blood sample may be submitted for analysis. A covering letter indicated the endorsements of the informational program by several interested agencies and organizations will be included in the kit. The Subcommittee recommended that the Society endorse an informational statement on PKU that is to be included in the mailing. The recommendation was approved, and the statement was printed in the February, 1966, issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

STATEWIDE IMMUNIZATION PROGRAM

The Subcommittee met with Mr. Norman Pawlewski, a representative of the U. S. Public Health Service now on assignment with the Preventable Disease Division of the State Department of Health. Mr. Pawlewski touched on the following points: (1) the improving program of immunization for newborns; (2) the apparent need for some type of school program to aid in overcoming the low incidence of booster immunizations; (3) the wide difference in thinking

among county medical societies as regards immunization programs and activities; (4) the availability of free measles vaccine, and the problems it may pose in the area of reactions; and (5) the problem of making sure that newborns are immunized, particularly in rural areas. Mr. Pawlewski expressed the willingness of the Department of Health to support mass immunization programs to the extent of supplying materials, but only if proper approval has been given by the county medical society involved.

In response to a suggestion from Mr. Pawlewski that physicians might be designated by their county societies to provide immunizations to medically-indigent families referred to them by the Health Department, the Subcommittee members responded that the desire of individual physicians and county medical societies to provide their services to government programs either free of charge or at reduced charges had diminished almost to the vanishing point.

The desirability of making immunization of children compulsory was considered by the Subcommittee. It was noted that 27 states now have laws of this type. The Subcommittee acknowledged that such a legislative course of action deserved consideration. Mr. Pawlewski said he planned to develop a legislative proposal in this area for consideration by the next General Assembly, and he said he would make a copy of it available for review by the Subcommittee. The Subcommittee approved a motion expressing the members' wish to evaluate any proposed legislation, with the intention, conceivably, of recommending to the appropriate higher body that the Society support the measure.

The Subcommittee recommended to Mr. Pawlewski that he pursue the program of mass immunization on an individual basis with county medical societies, without any endorsement from the State Society.

IOWA YOUTHPOWER PROJECT

The Subcommittee approved the Society's continuing its participation as a co-sponsor of the Iowa Youthpower Project.

VENEREAL DISEASE

The possibility that the IMS might take the lead in developing an instructional program for Iowa teachers on the subject of sex education was discussed, and considerable enthusiasm was expressed. It was felt that the IMS might derive considerable benefit by presenting or sponsoring such a workshop. Dr. Donnelly indicated she felt that the Department of Health would be interested in supporting it, and she is gathering additional information for the members of the Subcommittee to consider.

—W. J. BALZER, M.D., *Chairman*

SUBCOMMITTEE ON PUBLIC ASSISTANCE

The enactment of amendments and additions to the Social Security Act, especially Title XVIII (Medicare) and Title XIX dealing with the extension of medical services under all public assistance programs, has made the year unique for the Subcommittee on Public Assistance. The extension and broadening of all of the public assistance programs have obviously required discussions, but the time lag in the promulgation of rules and regulations by the Department of Health, Education and Welfare, and the need for interpretations of those rules by state departments, have necessitated postponement of formal meetings on them with the State Board of Social Welfare. But the Subcommittee members have been individually active in informal discussions, and have made formal reports of various meetings and activities to the appropriate bodies of the Iowa Medical Society.

Federal requirements pertaining to legend drugs, medical supplies and over-the-counter products were discussed with representatives of the Iowa Pharmaceutical Association, as well as with the State Board of Social Welfare. The policy in effect under MAA since its inception was extended to recipients of medical and remedial care, with the result that a physician's prescription will be required each time. This policy had not been adversely received by members of the Iowa Medical Society.

The Subcommittee indicated to the Board of Social Welfare that family-planning and birth-control services are subjects within the confidential realm of doctor-patient relationships, so that the physician may refuse to provide such services on the basis of his own personal and/or religious beliefs. The refusal of a physician to provide this information and these services should not be interpreted as discrimination under the Civil Rights Act.

The Subcommittee voiced objections, and ultimately through contacts at the state and national levels caused a procedural change so that a physician will not be required to certify compliance with the Civil Rights Act on each individual form that he submits to the State Department of Social Welfare.

The Board of Social Welfare was officially informed, on July 22, 1965, that the negotiation for fees with all third parties, either public or private, would be on the basis of usual, customary and reasonable fees. When the voluntary supplementary medical insurance provided through Part B of the new Medicare program has been purchased for appropriate groups of individuals receiving medical and remedial care (OAA), the Subcommittee understands that physicians will be paid usual, customary and reasonable fees for services rendered those recipients, just as for those provided to all others covered under Part B of Medicare.

The chairman of the Subcommittee on Public Assistance served as one of two official IMS delegates to the National Conference on Federal Medical Assistance Programs, sponsored by the AMA. The chairman's report recommended that the IMS should scrutinize information, rules, regulations and interpretations of Title XIX very carefully, through appropriate committees. Strict surveillance should also be given to the implementation of aid to medically-needy children and to medically-indigent adults between the ages of 21 and 64. Moreover, the concept of usual, customary and reasonable charges should be insisted upon for all medical services under Title XIX, and the use of an independent or private fiscal intermediary should be encouraged when Title XIX is implemented.

The Subcommittee plans to meet once again before the meeting of the House of Delegates, and items considered at that time will be submitted in a supplemental report.

Again the chairman would like to extend his heartfelt thanks to all members of the Subcommittee and to all of its technical advisors for their outstanding efforts in providing information and counsel.

L. J. O'BRIEN, M.D., *Chairman*

in diarrhea

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Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . 2.5 mg.
(Warning: May be habit forming)
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Versatility: The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or as adjunctive therapy in diarrhea associated with:

- **Ulcerative colitis**
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Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, given in divided doses, until diarrhea is controlled, are:

Children: 3 to 6 months — 3 mg. (½ tsp.* t.i.d.)
6 to 12 months — 4 mg. (½ tsp. q.i.d.)
1 to 2 years — 5 mg. (½ tsp. 5 times daily)
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5 to 8 years — 8 mg. (1 tsp. q.i.d.)
8 to 12 years —10 mg. (1 tsp. 5 times daily)

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily)

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the therapeutic dose.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

SEARLE *Research in the Service of Medicine*

MAA LIAISON COMMITTEE

Two drastic changes have taken place in the Iowa MAA program since the last meeting of the IMS House of Delegates. All will recall that the 1965 Iowa General Assembly amended the MAA law to make it permissive for the State Board of Social Welfare to contract or not contract with a fiscal agent for processing and paying MAA claims. As had been predicted, the State Board of Social Welfare, following action of the General Assembly, voted to eliminate the fiscal agent (formerly Hospital Service Inc. of Iowa) and process MAA claims at the county level much in the same manner as claims processed under OAA, ADC, Aid to the Blind and Aid to the Disabled.

Several meetings were held by the MAA Advisory Council, both independently and with the State Board of Social Welfare, in an effort to convince the Board that such a change was not in the best interests of the public or the professions participating in MAA. As the IMS official representative on the MAA Advisory Council, your chairman participated in all of these conferences, both formal and informal, in an effort to maintain the MAA program on the same administrative basis as had previously existed and which had proven effective. All of these efforts were to no avail, and late in 1965 the responsibility for processing MAA claims was assumed by county departments of social welfare.

The next change in the MAA program which required attention by the MAA Liaison Committee and its chairman, serving as the IMS official representative on the MAA Advisory Council, was a curtailment in the services for which the MAA program would make payment. Early in the fall of 1965 it became apparent that the appropriation for the first year of the biennium would not be sufficient to continue the MAA program on its existing basis. Immediately upon learning of this development, the IMS took an active role in discussing this matter with all appropriate organizations and individuals.

The Board of Social Welfare held a meeting with the MAA Advisory Council on Sept. 29, 1965, and reviewed the status of MAA funds and suggested that the Council report its recommendations regarding changes in the MAA program to the Board no later than October 15.

During this period, the Society's delegate on the MAA Advisory Council was in constant contact with the Board of Trustees of the Iowa Medical Society in order that he might be in a position to express medicine's viewpoint on this matter to the entire MAA Advisory Council. The Board of Trustees, on the basis of existing policies of the IMS, took the position that a reduction in services under MAA would be preferable to a reduction or proration of fees.

The MAA Advisory Council made suggestions to the Board of Social Welfare but did not take a position regarding reduction in fees versus reduction in services.

On October 10, the DES MOINES SUNDAY REGISTER carried an article reporting that the Board of Social Welfare planned to prorate MAA fees to all vendors by reducing payments 25 to 30 per cent. Following that news release, appropriate contacts were made which resulted in an action by the Board of Social Welfare on October 11 reducing MAA services rather than prorating fees. The Board further requested the staff to determine what services should be reduced and report its recommendations to the Board at its next meeting, October 19.

During this interim period, the Society's MAA Liaison Committee held a telephone conference to review the entire subject in detail. After considering various possibilities for reducing MAA expenditures, the Committee members agreed that the most prudent solution would be a reduction in services available to MAA recipients.

The entire matter was then reviewed with the Iowa Medical Society Executive Council at its November, 1965, meeting. As is well known, the State Board of Social Welfare curtailed services effective December 1, 1965, so that now the MAA program basically includes the following services: 15 days' hospital care; 60 days' nursing home care, following hospitalization; physicians' services in hospital or nursing home; drugs for hospital and nursing home patients; physicians' services for 60 days following a stay in a hospital or nursing home.

It should be pointed out that the usual and customary fee concept has been maintained under the MAA program.

With the advent of Medicare in July, 1966, and the probability of state legislation to implement Title XIX of the Social Security Act, the MAA program will continue to undergo marked changes. Your Committee will maintain close liaison with other IMS committees so that all efforts of the IMS in the area of welfare health services can be coordinated.

W. J. MORRISSEY, M.D., *Chairman*

SUBCOMMITTEE ON AGING AND CHRONIC ILLNESS

The Subcommittee on Aging and Chronic Illness has had no specific problems referred to it in the year 1965-1966. A considerable volume of material has come to the Subcommittee members' hands from state and federal sources (both professional and non-professional).

Like the financing, it is apparent that the bulk of the policy-making for this aging and chronic illness program is coming from the highest levels of the federal government. We can but await further developments to know how the State of Iowa will and can function under the directives.

The IMS has been invited to share in planning a statewide conference on "homemaker services" this spring. The conference is receiving its impetus from the State Department of Health and the State Department of Social Welfare. A physician representative of the Society attended the initial planning session in mid-February.

G. E. MONTGOMERY, M.D., *Chairman*

SUBCOMMITTEE ON REHABILITATION

The Subcommittee on Rehabilitation has not met during 1965-1966, since no particular problems have been referred to it.

It may be of interest to the House of Delegates, and indeed to the entire membership of the Society, that there is considerable activity in the area of rehabilitation at the U. of I. College of Medicine. A committee has been named by the dean of the College to implement a comprehensive rehabilitation program as a unit directly responsible to him. It will eventually become a comprehensive unit for evaluat-

ing the handicapped person. Its recommendations will be passed to existing agencies in the areas of physical restoration, vocational counseling and training, and job-placement. Liaison will be maintained by the College of Medicine with those agencies. At the outset, beds for this unit will be provided on a moderate scale at the State Sanatorium in Oakdale, which now is a part of the College of Medicine.

As the unit grows, administrative plans call for the addition of a variety of research activities. The main purposes of the unit will be to train personnel, to facilitate research in rehabilitation, and last, to provide service.

The Subcommittee will keep the Society informed of further progress as it occurs.

C. B. LARSON, M.D., *Chairman*

COMMITTEE ON SAFE TRANSPORTATION

In an effort to reduce deaths and injuries resulting from automotive accidents, the Committee on Safe Transportation continues to maintain liaison with the Department of Public Safety on all matters pertaining to highway safety. The Committee worked closely with Mr. W. F. Seuppel, who resigned from his position as Commissioner of Public Safety on January 1, 1966, and it is anticipated this same relationship will continue with Mr. Gene Needles, the present Commissioner.

As authorized by the 1965 House of Delegates, the Committee had hoped to develop guidelines in connection with the appointment and function of a Medical Advisory Board to the Department of Public Safety, but legislative matters of import to the Department of Public Safety took precedence over this project. The Committee plans to continue to meet with appropriate officials from the Department regarding this matter, so that specific recommendations can be submitted to the IMS House of Delegates or to the Executive Council for final consideration at some future date.

The Committee was represented at several conferences sponsored by the Department of Public Safety, including meetings to discuss proposed driver-education legislation, which was ultimately enacted by the 1965 Iowa General Assembly. Committee personnel also attended traffic safety hearings scheduled January 10-17 by the attorney-general of Iowa, and the proceedings will be made available for study by all members of the Committee.

On recommendation of the Committee, the IMS has endorsed production of a 28-minute color film on the drinking driver which is being developed by the Iowa State Commissioner on Alcoholism. This project has received the endorsement of the National Safety Council, the National Education Association and the National Congress of Parents and Teachers. These organizations will also assist in the production and promotion of the film so that it will receive nationwide distribution and attention. At the request of the IMS, it is likely that the AMA will also provide technical and promotional assistance.

At a date yet to be selected, the IMS along with the State Department of Health and the University of Iowa College of Medicine, will co-sponsor a short course on emergency care of the sick and injured, for ambulance drivers, highway patrolmen, firemen, rescue-squad members, and hospital emergency-room personnel.

At the request of the Department of Public Safety, the Committee has made arrangements for five physicians to speak on emergency medical care procedures at the in-service training school for all members of the Iowa Highway Patrol, February 21-March 9.

As a public service, the IMS continues to secure films on automotive safety for use by schools throughout the state.

ARTHUR H. DOWNING, M.D., *Chairman*

SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

The Subcommittee has met once this year and several subjects were considered. The Subcommittee reaffirms its belief in the separation of inpatient and outpatient care for mental patients. It believes the action which the 1965 IMS House of Delegates adopted, on the recommendation of the Subcommittee, will offer some protection to the private practice of psychiatry against those who may advocate bringing the specialty into the confines of the hospital.

The Subcommittee is considering ways of making background information available to the county societies on mental health programs. It plans to draft and recommend the distribution of a letter to them which will (1) call attention to the action of the 1965 House of Delegates regarding the establishment of mental health clinics in the state; and (2) reiterate the Subcommittee's support of the IMS Revised Standards for Mental Health Clinics, as adopted in 1961. A copy of the standards and other informational material are to be included with this letter.

A new 16-member State Committee on Mental Hygiene was established last fall, in compliance with legislation enacted by the 61st Iowa General Assembly that gave the Iowa Mental Health Authority a statutory footing. Eight members of the Committee are designated officials of state government, and eight are appointed from private groups by the Governor. The chairman of the IMS Subcommittee on Nervous and Mental Diseases has been named by the Governor as the Society's representative on the State Committee on Mental Hygiene, and at the group's organizational meeting last August, he was elected chairman of the Committee.

The new law which delineates the functions of the Committee is in part as follows: "All authorized funds of the Mental Health Authority shall be disbursed under the supervision of the State Board of Regents and programs of the Iowa Mental Health Authority shall be administered according to policies established by the Committee on Mental Hygiene."

The Subcommittee has maintained its interest in the Comprehensive Plans for Mental Health and Mental Retardation which have been or nearly are completed. The state must complete comprehensive plans of this type in order to qualify for construction money under the federal government's Facility Construction Program for Mental Health Centers and Facilities for the Mentally Retarded.

The Subcommittee has indicated its willingness to work with the Iowa Chapter of the American Academy of General Practice in a continuing professional education program aimed at teaching psychiatric principles and concepts to the general practitioner. This program is being explored nationally by the AMA the American Psychiatric Association and the AAGP.

For informational purposes, the Subcommittee has

been provided the AMA's Report on the Special Rules for Psychiatric and TB Hospitals being developed for use under the new "Medicare" law.

Members of the Subcommittee are continuing to serve on a variety of committees of state government, as well as those of a number of private organizations.

T. C. PIEKENBROCK, M.D., *Chairman*

GRIEVANCE COMMITTEE

Under the very capable chairmanship of Dr. Herbert Merillat, numerous cases were brought to conclusion during the foregoing term and the Committee has been able to stay current during the year 1965-66.

In reviewing the work done and nature of complaints adjudicated the members noted a gradual change in the type of grievances submitted. Trivial complaints concerning minor differences over physicians' charges have declined, and more complicated grievances dealing with charges, proper medical or surgical procedures and most important doctor patients relationships seem to have become more frequent. Thus each case has required an involved study and has taken more time for the Committee to handle. Sixteen complaints of this nature were reviewed, and whenever possible the parties involved were called for a hearing before the Committee. It was also noted that the interprofessional relationships between physicians and the allied professions as well as among physicians themselves were causes of grievous misunderstandings, and such complaints had to be reconciled before the Committee.

The guidelines upon which the Committee based its actions were the opinions and rules of the Judical Council of the AMA together with common sense and fair fee schedules as published by our professional organizations.

As in the past, it occurred to all members of the Committee that the predominant cause of many complaints rests with the physician who does not communicate properly with his patients and thus fails to forestall misunderstandings. The public is being saturated with health information and therefore is more curious than formerly and is entitled to explanations from the doctor in terms which can be understood. An explanatory word about unusual billing procedures will often result in an amicable settlement.

Great care was taken so as to understand all sides of the complaints reviewed and to appreciate the viewpoint of the layman as well as the physician.

The highly individualized nature of the practice of medicine makes it mandatory for the rules of professional conduct and ethics to be observed at all times, and for caution to be exercised regarding utterances which are open to misinterpretation. The changing environment of medical practice will not make the task of the Committee easier unless the membership at large is conscious of the pitfalls outlined and will actively help to avoid them. Only then will our many hours of deliberation receive the reward all members of the Grievance Committee desire.

I hope that the physicians of Iowa appreciate our efforts. I wish to thank all members of the Committee for their faithful and enduring work, and especially to commend our secretary, Dr. Maland, for his skill and untiring diligence.

F. O. W. VOIGT, M.D., *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee on Medical Education and Hospitals is pleased to note that the IMS assumed leadership in the formation of a voluntary areawide health facilities and services planning council in Iowa. A detailed report from the Society's Ad Hoc Committee on Areawide Planning regarding this project is included in this HANDBOOK.

The Committee cooperated with the University of Iowa College of Medicine in surveying the physicians of the state to obtain information which would be helpful in provoking greater interest in, and in improving postgraduate programs developed by, the College of Medicine. Approximately 900 questionnaires were returned to the Society headquarters office, and the results are being tabulated by the College of Medicine.

On recommendation of the Committee, the IMS submitted a resolution at the 1965 Annual Meeting of the AMA pertaining to the "Revisions of the 'Essentials of an Approved Internship' Regarding Utilization of Ambulatory Patients." Although the Society's resolution was not formally adopted, the AMA House pointed out that no hospital's internship program will be penalized for lack of a formal, organized outpatient department, providing the necessary experience can be arranged by the appropriate organization of the hospital emergency facilities, or through acceptable preceptorships.

The Committee maintains close liaison with the University of Iowa College of Medicine, and R. C. Hardin, M.D., the dean, has met with the Committee to report on matters of mutual interest and concern.

The Committee maintains an interest in medical-careers projects, and the IMS continues to provide appropriate films and informational literature to "Future Doctors Clubs" and to schools throughout the state in an effort to encourage students to enter the profession of medicine. Close contact has been maintained during the past year with the Drake University Future Doctors Club, and the Society has secured a series of 10 educational films from the AMA for showings to that group.

At the request of the College of Medicine, the Committee will consider the feasibility of co-sponsoring a clinical program in Iowa City at some time in the future.

R. N. LARIMER, M.D., *Chairman*

PUBLIC RELATIONS COMMITTEE

During the past several years, and up until the recent passage of Public Law 89-97 (the Medicare Law), the Public Relations Committee expended a great amount of time and effort in developing a public information program, utilizing the mass communications media, to educate the public on the subject of voluntary vs. compulsory financing of health care for the aged.

In addition, however, the Committee has endeavored to develop and maintain continuing P/R projects, and these are summarized as follows:

1. *Hawkeye Science Fair*—The success and growth of this annual event for junior and senior high school students, under the sponsorship of the IMS, Drake University, and DES MOINES REGISTER AND TRIBUNE, has been phenomenal. Approximately 200 students displayed exhibits at the first HSF in 1958, and over 600 students exhibited their science projects in 1965.

It has been estimated that over 10,000 visitors view the exhibits during the Science Fair each year. The 1966 HSF will be held at the Veterans Memorial Auditorium in Des Moines, April 1 and 2.

2. *Community Health Week*—At the request of the IMS, Governor Hughes officially proclaimed the week of November 7, 1965, as Community Health Week in Iowa. News releases noting the achievements in medical science over the past several decades, and calling attention to the work of the IMS, were mailed to all daily and weekly newspapers in the state, along with several suggested editorials and pertinent health facts. A collection of news clippings indicates that the materials were quite effective in promoting articles on matters relating to health. Spot announcements were also distributed to radio and television stations, and arrangements were made for several Iowa physicians to participate in special health programs pro-series of interviews over WOI-Television, Ames.

3. *Press-Radio-Television*—The IMS sponsors weekly radio health programs over WOI, Ames, and although no other radio or television series are scheduled on a regular basis, liaison is maintained with television and radio personnel to the extent that the Society is frequently called upon to suggest or contact physicians to participate in special medical programs. Appropriate press releases on subjects of public interest and concern are distributed to daily and weekly newspapers, as necessary, and appropriate meetings and projects of the Society are adequately publicized—i.e., annual meetings, fall conferences, areawide health facilities planning activities, etc.

4. *"In the Public Interest Articles"*—Reprints of the "In the Public Interest" section of the IMS JOURNAL are distributed each month to all communications media and to all Iowa legislators.

5. *Exhibits*—Exhibits have been developed by the IMS and obtained from the AMA for display at various allied health and lay meetings. A major project during the past year was the showing of an IMS-Iowa Medical Foundation exhibit at the 1965 Iowa State Fair. The central theme of the exhibit concerned the need for immunization against tetanus. It is estimated that approximately 50,000 people were exposed to this special IMS display. On recommendation of the P/R committee, the Iowa Interprofessional Association is developing a special health exhibit section at the 1966 State Fair.

On November 16, 1965, the chairman met with IMS officials and with representatives from the American Medical Association to discuss long-range plans in reference to the development of "in the public interest" projects, and this conference was followed by a meeting of the Public Relations Committee on February 2, 1966.

The Committee has agreed that a beneficial and effective public relations program could be developed by selecting a timely and central theme to be carried out simultaneously at the national and state levels. In this connection, it was acknowledged that much of the criticism directed at the medical profession could be alleviated if a program designed and implemented to inform the public as to what organized medicine has done, is doing and intends to do in reference to the so-called "physician-shortage" and physician distribution—i.e., health-careers, recruitment, physician placement, accelerated teaching programs, expansion of old and construction of new medical school facilities, etc. The committee has requested that this viewpoint regarding the development of a central theme, perhaps as outlined, be relayed to appropriate AMA staff members for further exploration.

The Public Relations Committee is studying the possibility and feasibility of developing a special weekly "ad" feature for inclusion in the "Picture Section" of the DES MOINES SUNDAY REGISTER, and for county medical societies to use subsequently in local newspapers.

The availability of public-service television time for the production of a series of health programs is also being explored.

The annual Senior Day program, for senior medical students at the University of Iowa College of Medicine and their wives, continues to be arranged by the Committee. This conference features a series of presentations in the afternoon by Society officers and Committee personnel on the activities of organized medicine, and a dinner/dance in the evening. In the past, the program has been scheduled in the spring, but the 1966 event was held on January 29, during the semester break. A record number of students and their guests were in attendance, and it is anticipated that this schedule will be followed in the future.

Representatives of the Public Relations Committee attended the AMA P/R Institute in Chicago on August 18-20, at which time information was presented on various "in the public interest" projects that are being implemented by county and state medical societies throughout the country.

The Committee acknowledges that physicians' services—both medical and non-medical—constitute the best "public relations" program for organized medicine, but it will continue to utilize all supplementary means available to enhance the image of the medical profession.

J. G. THOMSEN, M.D., *Chairman*

COMMITTEE ON INTERPROFESSIONAL ACTIVITIES

The IMS Committee on Interprofessional Activities, in cooperation with a similar committee from the Iowa Pharmaceutical Association, developed the program for the first statewide Congress on Medicine and Pharmacy, which was held on Sunday afternoon, September 26, 1965. Approximately 200 physicians and pharmacists were in attendance. The president of the Pharmaceutical Manufacturers Association presented the keynote address, and the remainder of the program concerned matters pertaining to the ethical and legal responsibilities of physicians and pharmacists.

The IMS and IPhA committees met in joint session on January 12, 1966, to discuss legislation introduced by Senator Philip Hart (D., Michigan) in reference to physician ownership of pharmacies. It was agreed that the IMS and IPhA have maintained consistent good relations and rapport, and it is reasonable to expect that continued cooperative efforts will result in further progress insofar as this issue is concerned. In this connection, the IPhA representatives were informed that the first AMA National Congress on Medical Ethics and Professionalism will be held in Chicago on March 5-6, and it is likely that ethical considerations of mutual interest to medicine and pharmacy will be thoroughly reviewed there. It was acknowledged that although the results of this Congress

may not be conclusive in reference to the subject of physician ownership of pharmacies, some new approaches and considerations relative to this problem may be indicated.

The Committee maintains close liaison with the Iowa Interprofessional Association, which consists of the Iowa Medical Society, Iowa Pharmaceutical Association, Iowa Dental Association, Iowa Veterinary Medical Association, Iowa Nurses Association and Iowa Hospital Association. John G. Thomsen, M.D., Des Moines, was installed as president of the Association in September; Oscar Alden, M.D., is a member of the IIA executive committee; and Mr. Donald L. Taylor, IMS executive vice-president, serves as its secretary-treasurer.

A continuing activity of the IIA is the distribution of health-careers information to school councilors and students throughout the state.

A major project for 1966 is the development of a special health exhibit section at the Iowa State Fair. All member organizations of the IIA will display exhibits, and appropriate related health organizations and firms will be encouraged to do likewise.

For informational purposes, officers of the IIA have been informed of the efforts of the Society in spearheading the formation of an association of the professions in Iowa. It has been pointed out that contrary to the objectives of the IIA, which are health-oriented, the primary purpose of an association of the professions would be to promote professionalism, and enhance the status of all of the professions.

OSCAR ALDEN, M.D., *Chairman*

HEALTH EDUCATION COMMITTEE

The Health Education Committee continues to make available for public distribution informational literature and films on a variety of health subjects. One of the most popular items developed to date is the bill-fold-size "Personal Health Information" cards, and several thousand are distributed each year, on request, to schools and civic organizations.

The "Doctors House Call" radio series, which began over station WOI, Ames, on March 13, 1963, continues on a weekly basis. To date, there have been 153 live 30-minute broadcasts, in which physicians from throughout the state have discussed and answered questions on health topics. Recognizing the importance of this series, the 1965 IMS Washington Freeman Peck Award was presented to WOI and WOI-TV for their continuing interest and cooperation in advancing public understanding of the science of medicine.

As has been its custom, the IMS served as a co-sponsor of the 17th Annual Health Education Workshop, along with the State Department of Health and 33 other voluntary health agencies and civic organizations. The conference was held at Iowa State University, Ames, on Thursday, July 8, 1965, and approximately 150 persons were in attendance, including six Society representatives. The theme of the conference was "Progress Through Adequate Public Health Services." As a result of that workshop, a regional meeting to discuss public health matters was held in Storm Lake on October 12, and additional regional conferences will be held in the future.

The Committee maintains close liaison with the Health Education Division of the State Department of Health, and continues to assist in securing speakers and consultants for school health education workshops (college-credit courses) scheduled each year at the University of Iowa, Drake University, and the State College of Iowa. Although the scholarship program has been discontinued for 1966, the IMS contributed two scholarships in 1965 to cover tuition and expenses for two teachers who were workshop participants. These workshops are attended by school administrators, teachers and nurses, and they serve to inform those in attendance about the opportunities and responsibilities to be found in a good school health program. The chairman of the Committee met with the commissioner of public health and representatives from the Physical Education Department of the State College of Iowa to assist in organizing and formulating specific plans for an expanded program in health education at SCI. If approved by the State Board of Public Instruction, that program will be incorporated as a credit course within the SCI curriculum.

The IMS Speakers Bureau assisted in developing programs for 10 county medical society meetings and 14 lay organization meetings during the past year, including the Summer Y-Teen Conference held in Pella, Iowa, last July, which was attended by 225 teenagers from throughout the state. The Committee continues to encourage the establishment of local speakers' bureaus, and to date, 11 county medical societies have undertaken this project.

C. D. ELLYSON, M.D., *Chairman*

Reports of Special Committees

COMMITTEE ON INDUSTRIAL HEALTH

The chairman of the IMS Industrial Health Committee was privileged to attend a conference on occupational health sponsored by the AMA Council on Occupational Health, last fall, in Indianapolis, Indiana. One point emphasized at that conference dealt with PL 89-97 and involved the rehabilitation of disabled industrial workers. The new Medicare Law contains an offset provision that prevents a worker from simultaneously receiving disability benefits under Social Security and benefits under a workmen's compensation statute. In the past, it has been possible for a worker to be paid more for remaining disabled than for returning to work.

The need for courses in industrial medicine in medical schools was emphasized at the AMA conference. It was reported that a program of summer employment for medical students in General Motors plants has helped provide experience in this field to aspiring doctors. A "no cost to industry" plan that exists in Iowa was explained to the conference participants. Interns at a Des Moines hospital, following a plant tour, are given on-site training by the plant physician over a two-day period.

The Society is continuing its efforts to maintain good rapport with the state industrial commissioner, Mr. Harry Dahl, Jr. Mr. Dahl has accepted an invitation to discuss aspects of the State Workmen's Compensation Program with the IMS Executive Council on March 17.

C. H. JOHNSTON, M.D., *Chairman*

OSTEOPATHIC AND MD/DO LIAISON COMMITTEES

Since the 1965 annual meeting, the IMS Osteopathic

Committee and the MD/DO Liaison Committee have held just two meetings each. The DO Evaluation and Enrollment Program, which is their principal concern, has progressed satisfactorily. Following is a summary of its present status:

1. Approved by Judicial Council	146
2. Approved by county but not by Council	7
3. Disapproved by Council	15
4. Hearings held	7
5. No hearing requested	6
6. Hearings pending	3
7. No reply from county or pending	16

It should be noted that a considerable number of osteopaths remain in the "no reply from county or pending" category. The IMS Osteopathic Committee has no wish to insist upon action from county medical societies regarding applicants whom they wish neither to approve nor to disapprove. But in instances where action has been postponed because of the M.D.'s uncertainty regarding procedures, the Committee and its individual members stand ready to be helpful.

Nationally, the osteopaths' situation has changed little during the past year. A New York court refused to compel the granting of M.D. privileges to osteopaths who had become M.D.'s by legislative fiat in California. And at the interim meeting in Philadelphia, last fall, the AMA's Committee on Osteopathy and Medicine reported that the Ohio resolution favoring the admittance of osteopathic graduates to internships and residencies in M.D. hospitals would receive continuing study. It seems unlikely that the Committee will recommend its adoption.

Now that the majority of practicing and eligible osteopaths in Iowa have been either accepted for the Evaluation and Enrollment Program, or refused, it seems probable that most future applicants will be osteopaths who have recently finished or are about to complete their training, and about whom the county medical societies may have extraordinary difficulty in forming judgments. Two possible solutions for this problem were proposed at the meetings of the IMS Osteopathic Committee and MD/DO Liaison Committee on January 27. One of them would be to set a one-year waiting period for all such applicants; the other would be to grant them temporary or provisional enrollment. No decision has been reached on that question.

J. M. RHODES, M.D., *Chairman*

PRECEPTORSHIP COMMITTEE

The IMS Preceptorship Committee has held no meeting during the past 12 months. Its members want to continue serving as liaison, for the Society, with Dean R. C. Hardin and Dr. W. M. Fowler, who administer the preceptorship program at the U. of I. College of Medicine, and plan to meet with them at least annually hereafter.

The chairman and Dr. C. E. Radcliffe, one of the Committee members, made sure that Dean Hardin and Dr. Fowler are satisfied with the way in which the program is operating, and in particular with a preceptorship's continuing, with rare exceptions, to be a requirement for graduation.

Since the adoption of an 11-month school term, with staggered vacation periods for medical students, the College of Medicine has had little difficulty in arranging preceptorships that are convenient for the respective private practitioners and students, and because many physicians offer to take two or more preceptees each, at separate times, there is no shortage of preceptors.

L. D. CARAWAY, M.D., *Chairman*

COMMITTEE ON RURAL HEALTH

The IMS Rural Health Committee held a meeting on the final day of the 1965 Annual Meeting (April 14), at which two of the staff members of the Extension Service at Ames sought the Committee members' ideas on topics for study in the "Health" segment of 4-H Club work. (The four H's, it will be remembered, are Head, Heart, Hands and Health, and quite properly the people who have general supervision of 4-H Clubs throughout the state seek suggestions from the Rural Health Committee regarding health activities for those groups.) The topics proposed were (1) the advisability of individual physical examinations in place of the relatively superficial mass examinations conducted in past years for members of 4-H Clubs; (2) the necessity of a balanced diet; (3) the need for care in operating farm machinery; (4) improvement of farm and small-town water supplies and waste-disposal systems; (5) improvement of hygiene instruction in schools; and (6) career opportunities in health fields.

At previous meetings of the Rural Health Committee, a number of methods had been proposed for promoting tetanus immunizations. As a result, during the past 12 months, the IMS bought a print of the Mayo Clinic moving picture "Tetanus and Its Prevention," and lent it to medical societies and hospital staffs throughout the state for showings to physicians and paramedical personnel. Members of the House of Delegates are urged to tell the officers or program chairmen of their respective county medical societies that the film is available from the IMS, and to get them to show it, if they haven't already done so. It is probable that some of the local tetanus-immunization promotions during the past year have resulted from such showings.

At the suggestion of the Rural Health Committee, the IMS Public Relations Committee set up a booth at the Iowa State Fair, at which principal emphasis was given to tetanus immunization. Also at the Rural Health Committee's urging, one of the "In the Public Interest" ("green sheet") features in the JOURNAL directed attention to immunization.

Special commendation is due the Woman's Auxiliary for the help it has given this campaign. Auxiliary members helped staff the booth at the State Fair, and they have been distributing posters for display in doctors' offices.

Dr. R. W. Boulden, of Lenox, and an IMS staff member, as well as Dr. S. P. Leinbach, of Belmond, a member of the AMA Council on Rural Health and Mrs. Leinbach, the Auxiliary's Rural Health chairman, represented Iowa at the AMA Rural Health Conference held at Miami Beach on March 26-27, 1964. It is expected that one IMS representative in addition to the Leinbachs will attend the similar AMA meeting in Colorado Springs next month.

The IMS Rural Health Committee plans to hold a meeting in March, at which a representative of the Institute of Agricultural Medicine, at the U. of I., will outline a program to inform doctors about the pre-

vention and about the treatment of insecticide poisonings, and a representative of the State Health Department will tell of the plans for establishing local public health departments throughout the state. It is probable that the Committee will want to make that meeting the subject for a supplemental report.

J. W. GAUGER, M.D., *Chairman*

COMMITTEE ON BLOOD BANKING

The Committee on Blood Banking urges all Iowa physicians to keep well informed of the newer developments, changing concepts, and growth of blood banking systems. The primary interest of physicians in blood and blood banking must be to secure the widest, most efficient and economical supply of safe, usable blood and blood derivatives for the public.

The Iowa Medical Society should continue to support the Iowa Association of Blood Banks in its efforts to set up a statewide Blood Assurance Program to provide an opportunity for people in all geographic areas of the state to protect themselves against expenses of blood transfusion by making periodic donations to certain regional blood banks. Comments or suggestions are solicited from physicians, particularly in areas where blood bank services are not readily available.

Public Law 89-97 (Medicare) will affect blood banking practices in several ways. It will augment the continuing problem of all forms of blood insurance by partially paying for blood replacement without actually providing blood donors.

Members of the Iowa Medical Society should know that the American Association of Blood Banks is now negotiating with the Office of Emergency Planning for direct contracts for AABB members on the same basis as the American Red Cross for procuring blood for defense in time of war.

Legislation aimed at declaring blood "a service and not a commodity" is having good success among state legislatures, but it is bogged down in both houses of Congress. Owing to the plethora of health and welfare bills now facing Congress, the Long Bill (S. 2560: A bill to amend the antitrust laws to provide that the refusal of nonprofit blood banks and of hospitals and physicians to obtain blood and blood plasma from other blood banks shall not be deemed to be acts in restraints of trade, and for other purposes) has been given low priority. We are asked to bide our time until the measure has a good chance for active consideration.

J. M. LAYTON, M.D., *Chairman*

CHIROPRACTIC COMMITTEE

The Chiropractic Committee met once during the year, and at that meeting a brief résumé of previous activities was presented, but its primary attention was focused on ways and means of presenting intelligent information about chiropractic to physicians and ultimately to their patients.

At that meeting, Mr. Robert Youngerman, a member of the investigative branch of the AMA, presented a series of slides and an accompanying tape-recorded commentary on chiropractic, as well as an exhibit prepared by the AMA on the subject. The exhibit has been shown at several large meetings.

After viewing those slides and facsimiles of the exhibit, the Committee members unanimously agreed that they should be presented to the Iowa Medical Society at its Annual Meeting.

Also, the Committee recommended that its name be changed from Committee on Chiropractic to Committee on Quackery. That recommendation has been reported to the Board of Trustees, and at the proper time it will be implemented. Therefore no action is requested from the House of Delegates.

R. A. BERGER, M.D., *Chairman*

DOCTORS' ASSISTANTS ADVISORY COMMITTEE

The Iowa Medical Society displayed an exhibit at the Annual Meeting of the Iowa Medical Assistants' Association which was held in Mason City on May 14-16, 1965. Also, the IMS arranged for a panel of doctors to participate on the program to discuss the IMS, IMF, IIA and IPPL. Plans are now being made for the IMS to exhibit at the 1966 IAMA Annual Meeting, which is to be held in Des Moines, May 13-15.

The Seventh Annual In-Service Workshop for Medical Assistants was held October 3-6, 1965, in Iowa City under the leadership of Dr. William Coder, and approximately 45 medical assistants attended. An IMS staff representative was also present.

The IAMA served coffee at the meeting of the House of Delegates during the 1965 IMS Annual Meeting, and plans to do so again at the 1966 meeting.

C. W. SEIBERT, M.D., *Chairman*

USUAL AND CUSTOMARY FEE SURVEY COMMITTEE

On September 9, 1965, the chairman of the Usual and Customary Fee Survey Committee gave the Board of Trustees a detailed analysis of the information obtained in the Committee's survey project. It was then decided that a subcommittee of the Board, together with the chairman of the Committee, should develop specific recommendations as to the utilization and distribution of the survey data. In its report, the Board of Trustees will present the recommendations which that subcommittee formulated and which the Executive Council subsequently approved.

At the risk of repeating information which is already known to members of the House of Delegates, it may be helpful for me to note several of the points in the Committee's September report to the Board of Trustees:

—Approximately 1,500 member physicians returned questionnaires, for a survey response of approximately 74 per cent.

—All individual responses to the survey have been assembled in a two-volume compilation of data. They are arranged to show the individual responses for each county beneath the procedure number and description.

—The aforementioned two-volume compilation also includes the efforts of the Committee at purifying the survey in instances where there appeared to have been either mechanical or clerical errors, or misunderstandings of the procedures on the part of the survey respondents. For reference purposes, the two documents contain both the actual ranges of fees reported and the Committee's purified range. In most instances, the two ranges are identical.

—Analysis of the survey results indicates that though there is a general pattern of consistency in medical charges throughout the state, certain geograph-

ic areas report higher levels of usual and customary fees in several instances.

The Committee believes that the data resulting from the survey will be useful in implementing the usual and customary fee concept. In its report to the Board, it recommended that information contained in the two master volumes be withheld from general distribution, and be used primarily for reference purposes. It is felt that any widespread circulation of the figures would run the risk of tying physicians to an inflexible fee schedule. Instead, the survey material has been devised to assist in program cost determination and claims administration, and the individual physician is left the responsibility and freedom to determine his usual and customary fees.

For a more detailed review of the form and use of the survey data, the chairman suggests that members of the House give their attention to the supplemental report of the Board of Trustees on this subject.

He again wishes to express his sincere thanks to the members of the Committee for their conscientious and effective work on this project.

C. V. EDWARDS, SR., M.D., *Chairman*

COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

Although the Committee on National Emergency Medical Service initiated no new projects during the past year, it has maintained close liaison with Mr. Ed Hresko, director of the Health Mobilization Division of the State Department of Health, as well as with the Office of Civil Defense.

Information of special interest to physicians excerpted from the CIVIL DEFENSE NEWS DIGEST, a publication of the Office of Civil Defense, continues to be published in the IMS JOURNAL so as to enhance communications between the Civil Defense Office and physicians throughout the state.

Milton Barrent, M.D., represented the Committee at the 16th National AMA Conference on Disaster, which was held in Chicago on October 30-31. A detailed report concerning that meeting was provided to all members of the Committee. The Conference speakers emphasized that individual physicians must become acquainted with the principles of mass casualty care, and must help to organize programs designed to broaden the skills of members of the allied health professions in their communities.

In this connection, the Committee wishes to acknowledge the activities of county civil defense and disaster committees, which were established several years ago to work with local civil defense directors. A physician serves as committee chairman in each county, and the membership also includes a dentist, a veterinarian, a pharmacist, a nurse and a hospital administrator.

The Committee will continue working with county medical societies, allied health professions and state agencies on matters relating to civil defense and emergency medical service.

R. C. LARIMER, M.D., *Chairman*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Woman's Auxiliary in Iowa continues active participation in and support of projects recommended or assigned to it. The Advisory Committee commends the members on their cooperation and assistance to the medical society at both the state and county level.

Auxiliary membership for 1965-1966, over the state, has shown a slight increase, and it is hoped that it will continue toward that hoped for 100 per cent.

The 25th Anniversary of the Health Education Loan Fund, formerly the Nurses' Loan Fund, is being observed this year. This Committee has made eight new loans and has 19 girls in nursing schools at the present time. The Benefit Dance at the time of the IMS Annual Meeting helps greatly in making this health-team project one of the very important segments of the Iowa Auxiliary's program. Physicians are urged to support it by purchasing tickets.

The Community Service Committee continues to sponsor the AAPS Essay Contest on the advantages of free enterprise. Iowa again had two prize-winning essays at the national level last spring. It also has as one of its projects the Volunteer Health Service Award, which is presented at the Annual Meeting to an outstanding lay woman in the health field. Two additional county Auxiliaries have undertaken Homebound Handcraft Sales, in cooperation with the Iowa Society for Crippled Children and Adults. In addition, many of the county Auxiliaries sponsor and cooperate in their own communities on local projects.

The AMA-ERF Committee has increased the funds contributed for the support of medical education and research, but still feels it falls far short of the potential for Iowa.

The International Health, Health Careers, Mental Health, Disaster Preparedness, Rural Health, and Safety Committees have all carried out suggested programs wherever feasible.

THE WOMAN'S AUXILIARY NEWS, published each month in the JOURNAL OF THE IOWA MEDICAL SOCIETY and distributed as a reprint to members, reports the organization's activities and accomplishments, and serves as an excellent informational medium.

The Advisory Committee strongly urges each county medical society to support, aid and encourage membership in the Woman's Auxiliary.

S. P. LEINBACH, M.D., *Chairman*

COMMITTEE ON GROUP INSURANCE

The Committee on Group Insurance met on November 3 and December 2, 1965, to review the group insurance programs which have been established for members of the Iowa Medical Society.

The Committee reviewed the past year's experience with the IMS Statewide Group Blue Cross and Blue Shield Programs. Blue Cross and Blue Shield officials informed the Committee members that in view of the favorable experience during the past year, it had not been necessary to make a premium rate change for the coming year. It was agreed that an open-enrollment period for the Blue Cross and Blue Shield Statewide Group should be held at an early date.

The 1965 IMS House of Delegates had requested the Committee to study the feasibility of establishing a health insurance program (Blue Cross/Blue Shield and/or commercial insurance) for physicians' employees and for medical society staff members, both state and county. Before considering any recommendations pertaining to such coverage, the Committee agreed that a survey should be conducted to determine the amount of interest in such coverage, and how many persons might be covered. After the survey results had been compiled, a conference was held with

Blue Cross and Blue Shield officials and representatives of the Prouty Company. Both were asked to submit proposals. Written communications have been received from both organizations. Blue Cross/Blue Shield indicates that from its studies the issuance of this group coverage would be unjustified. The Prouty Company reported that it is unable to obtain an offer through a commercial carrier, and further that it has doubts of the possibility of forming such a group under Iowa insurance laws.

The members of the Committee on Group Insurance, when they had considered those responses, agreed that it does not seem practical to make further attempts to establish a physician-employee group health insurance program.

During the year the Committee received a number of requests from Society members to review the extent of coverage available under the Statewide Physicians' Blue Cross and Blue Shield Program. As a result, the Committee considered the possibility and desirability of adding major-medical insurance to the present group coverage. After considerable study, the Committee recommended to the Board of Trustees that the Society offer the major-medical coverage being marketed by Blue Cross/Blue Shield, and in line with an action of the IMS House of Delegates encouraging major-medical coverage, the Board of Trustees approved that recommendation. Literature describing the new program was distributed to the members of the Society by Blue Cross/Blue Shield during the open-enrollment period.

The results of the open-enrollment period have now been received, and unfortunately the number requesting major-medical coverage has been too small to enable Blue Cross/Blue Shield to implement it. Apparently there is not so much interest as was anticipated, since fewer than the required 200 individuals applied for it.

The Committee reviewed the Life and Disability Insurance Programs sponsored by the Society. It was reported to the Committee that 690 Society members participate in the Life Insurance Program, and that more than $7,000,000 worth of insurance is in effect.

With regard to the Group Accident and Sickness Disability Income Insurance Program, it was reported that claims for the first nine months of 1965 were $36,775.42 greater than for the same period in 1964. It is believed that this upward trend will level out.

The Committee continues to recommend these programs to members of the Society not now enrolled. Any member who desires information pertaining to the group life or group disability coverages should contact Mr. William R. Prouty, of the Prouty Company, 2124 Grand Avenue, Des Moines 50312.

W. O. PURDY, M.D., *Chairman*

IOWA BAR LIAISON COMMITTEE

No problems have been referred to this Committee during the year; hence no meetings have been scheduled.

The chairman is pleased to note and wishes to commend the 1966 Annual Meeting Program Committee for its scheduling a Medical-Legal Symposium for the afternoon general session of the IMS Annual Meeting, Tuesday, April 26. Four men highly qualified to speak on subjects of a medical-legal nature will participate in this symposium. We urge all members of the House of Delegates to attend it.

R. P. LAGONI, M.D., *Chairman*

COMMITTEE ON PARAMEDICAL SERVICES

During the year of 1965-66, no matters have been referred to the Committee on Paramedical Services, and thus no meetings have been held.

It perhaps deserves mention that since the last meeting of the House of Delegates legislation has been enacted which requires the licensure of physical therapists. This measure was enacted by the 61st General Assembly of Iowa.

Although it had not taken a position for or against the legislation, in its previous discussions with representatives of the Iowa Chapter of the American Physical Therapy Association the Committee had advocated a strong program of voluntary registration of physical therapists and other paramedical workers.

Certain suggestions concerning provisions in the licensure legislation were transmitted to the Iowa Chapter of the APTA, and they were reflected in the resulting law. Among these were (1) that a medical doctor be included on the board of physical therapy examiners; and (2) that the physical therapist provide services as prescribed by a physician licensed to practice in this state.

J. F. PAULSON, M.D., *Chairman*

POLICY-EVALUATION COMMITTEE

The Policy-Evaluation Committee has not held a meeting during the past year. As many members of the House of Delegates are aware, matters involving Iowa Medical Service and the Iowa Medical Society previously referred to this Committee are now being given joint consideration by the Board of Trustees of the IMS and the Executive Committee of Blue Shield.

C. V. EDWARDS, SR., M.D., *Chairman*

COMMITTEE ON RADIATION CONTROL

There is no report from the Radiation Control Committee, for it has held no meetings. The State Department of Health has assumed much of what the Committee started to do, and consequently, the Committee has had the role only of a consultant or advisor.

A meeting on radiation matters has been scheduled by the Health Department during March, and the members of the Committee have been invited to it. It is understood that the preliminary draft of a bill relating to radiation protection will be considered. This proposal would delegate authority for radiation control to the Department of Health, and would prescribe functions, powers and duties relating to the prevention and prohibition of excessive radiation.

A supplemental report will be submitted to the House of Delegates if actions taken at the meeting previously mentioned indicate a need for one.

F. R. PETERSON, M.D., *Chairman*

COMMITTEE ON MEDICINE AND RELIGION

The Committee on Medicine and Religion will sponsor a special orientation session on March 23 for chairmen of county medical society medicine and religion committees, and other interested individuals. The program will include a discussion of the basic objectives of the medicine and religion program as envisioned by the American Medical Association, and reports on local activities presented by a physician

and a clergyman who have participated in joint physician/clergy meetings. An AMA film will also be shown. It is entitled "The One Who Heals," and is a series of vignettes illustrating the kinds of situations in which the physician and the clergyman are involved in the care of patients.

Following the orientation program, the Committee plans to schedule a statewide conference in which physicians and clergymen throughout the state will be invited to participate.

The Committee is gratified that approximately 40 county medical societies have established medicine and religion committees at the local level, and it hopes that the remaining county societies will soon do likewise.

Special resource material and suggestions for scheduling joint physician/clergy meetings are provided to all county chairmen.

R. P. FERGUSON, M.D., *Chairman*

COMMITTEE ON EXFOLIATIVE CYTOLOGY

The Committee on Exfoliative Cytology has not met formally, but has operated by correspondence.

Suggestions have been made to the Iowa Division of the American Cancer Society relative to public and professional education and relative to research grants.

A school of cytotechology has now been established in Iowa.

We have recommended, and participated to some extent in an educational program on oral cytology for dentists. It was sponsored by the Oral Cytology Committee of the Iowa Dental Association, assisted by the Iowa Division of the American Cancer Society in the districts of Iowa.

Sponsorship of a vaginal irrigation technic of collecting material for screening in Iowa was disapproved.

The establishment of the Iowa Central Tumor Registry based in the College of Medicine of the University of Iowa was recommended, and it has now been established. A full description of it appeared in the March issue of the JOURNAL.

Consideration has been given to the proposal that each female patient past 25 years of age who is admitted to a hospital in Iowa should have a cervical smear if she has not had one during the previous year. The Iowa Chapter of the American Academy of General Practice has taken some interest in this work. Indeed its project is described on the GP page in the March issue of the JOURNAL. This Committee has not made a formal recommendation on this topic.

K. R. CROSS, M.D., *Chairman*

SUBCOMMITTEE ON MEDICAL PRACTICE IN HOSPITALS AND NURSING HOMES

The development of P.L. 89-97 rules and regulations pertaining to medical practice in hospitals has been followed by members of the Subcommittee. The appropriate reports of the AMA Advisory Committee to HEW have been routed from IMS headquarters to the members of the Subcommittee. By this means it has been possible for them to observe activity at the national level, to some degree.

As observers, the chairman and a member of the IMS staff attended a meeting of representatives and legal counsels of the Iowa Association of Pathologists, the Iowa Radiological Society and the Iowa Hospital Association in December. The impetus for this meeting came from the pathologists, and it was held for the purpose of exploring the situation in Iowa as it pertains to the payment of hospital-based specialists under P.L. 89-97. An effort was made at this meeting to relate Iowa's unique law (H.F. 21) to the provisions of "Medicare." The suggestion was made that it would be wise to attempt maintaining the status quo, at least for the present. This would mean handling payment for the whole of the specialist's service, both technical and professional components, under supplemental Part "B." It was felt that HEW officials might look favorably at such a course of action in Iowa, on a test basis, particularly if the IAP, IRS, and IHA would jointly endorse its adoption. The meeting concluded with all agreeing on the complexity of the problem and deciding to continue deliberations in the hope of arriving at a consensus.

The IMS is cognizant of the action taken by the AMA House of Delegates last October, reaffirming its belief in the separation of specialists' fees from hospital charges.

With the help of legal counsel, the Society will continue to aid in attempts to find a satisfactory answer to the problems confronting Iowa in this area as a result of P.L. 89-97. To this end, the president of the Society has provided the AMA with a letter outlining the Iowa law with regard to pathology and radiology services rendered in hospitals.

At this time it is not known exactly how these matters will be resolved. It appears likely that a supplemental report will have to be presented to the House of Delegates, setting forth later developments.

At the request of Dr. Arthur P. Long, Commissioner of Public Health, a member of the Society has been named to serve as a consultant to a Subcommittee of the Department of Health's Committee on Education and Training, and to assist in planning a short course or seminar on the prevention and control of infections in hospitals and nursing homes.

During the year, the Subcommittee on Medical Practice in Hospitals and Nursing Homes was formally designated as the Society's liaison with the Iowa Nursing Home Association.

F. D. WINTER, M.D., *Chairman*

PUBLICATIONS COMMITTEE

It seems that this report can be confined to the presentation of some factors that will deserve attention during the consideration of a proposal that is to be made at the House of Delegates meeting, calling for the elimination of scientific articles from the JOURNAL as a means of saving money for the IMS. As its scientific editor, I cannot be impartial about that proposal, but I shall phrase my statements as objectively as possible.

The JOURNAL is not supposed to show a profit, but it is quite true that its advertising revenue has fallen far short of meeting its expenses for several years. In 1965, its income failed to rise appreciably, and its outlays rose slightly.

The State Medical Journal Advertising Bureau, Inc., in Chicago, the cooperative space-sales agency maintained by a considerable number of state medical society journals, has recently undergone reorganization for the purpose of making it more aggressive. It is still too early to tell whether that action will help to alleviate the difficulty.

No other state medical society has downgraded its

journal to a bulletin, and thus there is no way of predicting whether such a move would lose most, or just some, advertising for the Society.

The elimination of scientific articles probably would not produce a major saving, first because those materials occupy no more than a third of each issue, and second because the staff members who work on the JOURNAL have additional responsibilities, and their jobs certainly would continue whether or not the same people occupied them.

Our JOURNAL, like those of other state medical societies, is a means of conveying information to doctors about the urgent health problems of our particular area and about projects designed to solve them. It helps in considerable measure to hold the IMS together, and to make it more influential in the councils of the AMA than its membership might otherwise justify.

The JOURNAL encourages research by Iowa physicians through offering them an opportunity to publish their findings. It offers review articles to keep busy practitioners abreast of current concepts. Principally, perhaps, it shows non-physicians that Iowa doctors are at least as much concerned about health problems as about socioeconomic issues.

The size of annual expenditure which those functions justify, of course, is something about which there can be considerable differences of opinion.

DENNIS H. KELLY, SR., M.D., *Scientific Editor*

STATE CLAIMS REVIEW COMMITTEE

The State Claims Review Committee functions as the Society committee through which all third parties can channel medical claims for review by a committee of physicians. Under established IMS policy, the Committee receives each such claim and forwards the case to the appropriate local county medical society for consideration and recommendation. The action of the county society is then transmitted to the State Claims Review Committee. Each member of the Committee is provided background information on the case under review, in addition to the recommendations of the county medical society. After the State Claims Review Committee has reached its decision, the entire case is forwarded to the president of the Iowa Medical Society for transmittal to the third party.

Several cases have been handled in this manner. Because of the importance of this process in implementing the usual and customary fee concept, the State Claims Review Committee intends to submit a comprehensive supplemental report at the time of the April, 1966, House of Delegates meeting, dealing in detail with each individual case reviewed, in order that the members of the House of Delegates can be apprised of the types of cases considered and the actions taken by the county medical societies. Naturally, the confidential nature of each case will be honored.

In addition, the Committee has certain recommendations which it feels will streamline the process of reviewing these cases, and it will submit them to the House of Delegates at its April, 1966, meeting.

R. S. GERARD, II, M.D., *Chairman*

VOLUNTARY HEALTH AGENCIES

The Committee on Voluntary Health Agencies has continued to blueprint what it hopes will be an effective program for developing close relationships with the various voluntary health and welfare agencies in the state.

Early this year as a step in this planning and in an attempt to become personally acquainted with representatives of the voluntary health agencies, the Committee met individually with the executive directors of the Iowa Tuberculosis and Health Association and the Iowa Association for Mental Retardation. The purpose of these informal visits was to share thoughts and ideas about ways of increasing the spirit of cooperation and understanding between the medical profession and the voluntary agencies. The discussions proved to be helpful.

The Committee is now in the process of drafting a letter which it hopes may be sent to the state's voluntary health agencies indicating the Society's desire, through the Committee, to assist and advise them, particularly on medical matters, if such assistance is desired. The letter would also suggest the implementation of a liaison-representative program. In this proposed program a member of the Society, and preferably a physician with an active interest in the work of the agency concerned, would be designated as the IMS liaison physician and would be requested to inform the Committee on agency projects that might be of interest to the Society.

The Committee also hopes to find ways of encouraging county medical societies to designate an individual physician or a committee to function in a liaison capacity with county units of the voluntary health agencies.

The Committee will keep the House of Delegates informed of its activities in this important area.

C. E. SCHROCK, M.D., *Chairman*

AD HOC COMMITTEE ON AREAWIDE HEALTH FACILITIES PLANNING

On recommendation of the 1965 House of Delegates, the Ad Hoc Committee on Areawide Health Facilities Planning was appointed soon after the 1965 Annual Meeting.

At its initial meeting on August 25, 1965, the Committee developed specific recommendations in reference to the creation and functions of a statewide voluntary areawide health facilities planning council, and these were approved by the IMS Executive Council on September 9, 1965.

In essence, the IMS was directed to spearhead the formation of a statewide planning council, and to develop a closer relationship with those groups which are interested in the total health care of the community. Further, it was recommended that the basic responsibilities of the planning council should be to conserve the funds available for the construction and operation of health facilities and for the development of health services; to avoid unnecessary duplication and to achieve maximum use of existing medical services and facilities; and to assure and maintain the high quality of medical care.

On invitation of the IMS, representatives from 27 professional, voluntary-health, state government and commercial agencies attended a Voluntary Areawide Health Facilities Planning Conference at the Society's headquarters office on October 27, 1965. Members of the Ad Hoc Committee provided background information regarding the development of the areawide planning movement; and the specific recommendations of

the IMS regarding the establishment, the purpose, and the objectives of a proposed statewide voluntary planning council were reviewed.

At the conclusion of the October 27 Conference, those in attendance approved a resolution calling for the creation of a voluntary areawide health facilities planning council in Iowa, basically as outlined by the committee. The chairman of the Society's Ad Hoc Committee was elected temporary chairman of the planning council, and was authorized to appoint a steering committee to develop specific recommendations regarding the purpose, objectives, functions, membership, etc., of the council.

The steering committee that was subsequently appointed, in consultation with members of the Ad Hoc Committee included representatives from the IMS, the Iowa Hospital Association, the Iowa Society of Osteopathic Physicians and Surgeons, the Iowa Nursing Home Association, the Iowa Bar Association, the Iowa Federation of Labor, the University of Iowa College of Medicine, the State Department of Health, the Health Insurance Council, the Greater Des Moines and Scott County planning councils, the Iowa General Assembly, and the Associated Health Organizations of Iowa.

A meeting of the steering committee was held on February 7, 1966, and the Society's legal counsel was in attendance. The steering committee authorized the attorney to prepare and file with the Secretary of State the articles of incorporation which will legally and formally create the "Health Facilities and Services Planning Council of Iowa (Voluntary)." It is anticipated that one of the major responsibilities of the state planning council will be to promote and assist local and/or regional councils; further, that projects of the voluntary state agency will be financed by membership dues and matching funds available through Hill-Burton grants.

The steering committee is recommending that a 21-member board of directors be created as the executive body for the council, including representation from the IMS. After appropriate nominations have been received from agencies designated by the steering committee, the committee will meet as a nominating committee to select the initial slate of 21 directors.

Following the meeting of the steering committee/nominating committee, representatives of the various organizations which have indicated an interest in becoming members of the planning council will be invited to attend a general meeting where recommendations of the steering committee regarding By-Laws, election procedures, etc., will be considered.

A detailed report on the status of the planning council will be presented to the IMS Executive Council at its meeting on March 17, and a supplemental report on this matter will be submitted to the House of Delegates in April.

HOMER L. SKINNER, M.D., *Chairman*

SPECIAL FACT-FINDING COMMITTEE ON USUAL AND CUSTOMARY FEE INSURANCE PLANS

Although the Iowa Medical Society has maintained and increased its efforts toward the effective implementation of the usual and customary fee concept, the Special Fact-Finding Committee on Usual and Customary Fee Insurance Plans has not had occasion to meet.

It may be of interest to the members of the House of Delegates that at least two commercial insurance companies have implemented group coverage programs in Iowa which embody the usual, customary and reasonable concept. On January 1, 1966, The Travelers Insurance Company put such a program into effect for John Deere and Company. It provides benefits for Deere personnel employed in plants at Dubuque, Waterloo, Ottumwa and Ankeny. The Aetna Insurance Company has had a similar program in operation for a period of about two years in the Quad-Cities area for the International Harvester Company.

From all apparent indications, these Iowa programs are working effectively for all parties involved.

O. D. WOLFE, M.D., *Chairman*

COMMITTEE ON MEDICAL ECONOMICS

The chairman of this Committee feels that problems of production, distribution and consumption were so immediate during the past year, and involved so many facets of medicine, that any study of them by the Committee would have been an exercise in futility. It seems certain, however, that the group will be activated, will gain stature as time goes on, and quite possibly will become a lifeline for the Society.

It is lamentable that many forces have seen fit to attack the medical profession, creating unrest in the minds of the sick, and tearing down the prestige and confidence that physicians have earned. They might, at least, have sought verification for their charges, or invited doctors to state their views on the issues.

We are forced to wonder whether it is possible both to defend our integrity and to combat disease without failing in one attempt or the other.

J. P. GALLAGHER, M.D., *Chairman*

DEBAKEY COMMITTEE

Following the 1965 Annual Meeting, the president of the Iowa Medical Society appointed an Ad Hoc Committee to study the report of the DeBakey Commission, the recommendations of which had been formalized, in part, into legislation to establish regional medical programs for the treatment of heart disease, cancer and stroke. The Heart Disease, Cancer and Stroke Amendments of 1965, based on the report of the DeBakey Commission, were signed into law by the President on October 6, 1965.

Prior to that time, however, the IMS, other state medical societies, and the AMA expressed objection to the bill (H.R.3140) and endeavored unsuccessfully to defeat it.

The Society's Ad Hoc Committee met soon after the conclusion of the 1965 Annual Meeting, with Robert C. Hardin, M.D., dean of the University of Iowa College of Medicine, at which time it was acknowledged that (a) the University Hospital in Iowa City is, in fact, a regional health facility, as provided by state legislation; (b) any funds appropriated under the then proposed legislation should be used to finance a study of the feasibility and desirability of creating regional medical programs throughout the country, rather than to finance immediate establishment of any facilities; and (c) the most pressing need is not for facilities but, rather, for health personnel.

During consideration of the bill, officials of the AMA conferred with the President of the U. S. and the Secretary of the Department of Health, Education

and Welfare concerning the proposed legislation. As a result, approximately 20 amendments recommended by the AMA were accepted by the administration. However, even though the amendments made H.R.-3140 less objectionable, the bill did not receive the support of the IMS or AMA.

Since the Passage of the Heart Disease, Cancer and Stroke Amendments of 1965—Public Law 89-239—the AMA has communicated with the U. S. Public Health Service to urge that proposed regulations for implementing the amendments be as complete as possible. The primary concern about the regulations as proposed by U.S.P.H.S. is their failure to specify that any patient care provided under the program must be incidental to research and training.

The AMA has also pointed out that the House Committee on Interstate and Foreign Commerce, in its report on the bill, sought to "emphasize that this legislation is to be administered in such a way as to make no change whatsoever in the traditional methods of furnishing medical care to patients . . . or methods of financing such care."

The AMA has made several specific recommendations concerning proposed regulations, including a change in one subsection so as to emphasize the limited extent of patient care intended by Congress.

Recently, a planning committee was formed to consider implementation of the heart disease, cancer and stroke amendments in Iowa, as well as the advisability of applying for federal funds to carry out a program as defined under the law. Committee members include the president of the IMS, the dean of the College of Medicine, and the commissioner of public health. Representatives from the Iowa Heart Association, Iowa Division of the American Cancer Society, Iowa Hospital Association, and Iowa Society of Osteopathic Physicians and Surgeons have also been invited to assist in this endeavor. The IMS Board of Trustees has recommended that this committee be organized as a study group merely to explore the feasibility of establishing a formal program in Iowa, and that the Society be advised of any specific recommendations of the planning committee before final action is taken in reference to development of a program in Iowa, and application for federal funds.

In this connection, Dean Hardin has emphasized that any program developed in Iowa should be one that will protect the status of the University Hospital as a teaching and research center. Further, any extensive programs of patient care which are not necessary for the teaching and research functions will be resisted.

A survey financed by funds available through P.L. 88-239 will be undertaken to determine what might be required to establish a regional program to implement the heart disease, cancer and stroke amendments in Iowa. The results of the survey will be utilized by the planning committee for information purposes only.

Inasmuch as the Heart Disease, Cancer and Stroke Amendments have now become law, and inasmuch as the IMS is now represented on The Iowa Planning Committee, consideration should be given to discharging the Ad Hoc Committee, since its original purpose has been fulfilled.

H. J. SMITH, M.D., *Chairman*

(This concludes the material that was published in the HANDBOOK FOR THE HOUSE OF DELEGATES.)

At the Speaker's invitation, Dr. Ober presented Mrs. Sue Boe, an AMA staff member, to speak on matters pertaining to AMA liaison with women's organizations and other service and civic groups.

MRS. SUE BOE

I am delighted to be here. It has been a dreadfully long time since I was a student at the State University of Iowa, but my telling you of that episode in my life will let you know that I have been in your state previously, and certainly have enjoyed my stays here.

Possibly one way I can start out is to oversimplify and state that it is a known fact, to women at least, that every female baby born in the United States has a congenital heart condition. There is no objective evidence to substantiate it, and there is no scientific name for it, but in lay language it is called "tenderheartedness," and it is present in every little girl from the time she begins playing with her first doll. You, as daddies, have watched your little girls tenderly taking care of dolls. It is obvious that women as a class are interested in human welfare and contentment. By the time girls grow to adulthood, that concern is something to be reckoned with in them. In the United States there are 300 national organizations with 50,000,000 women as listed members of constituent clubs, and all of those clubs engage almost continuously in health projects.

One of my reasons for my being here is so that I may tell you why those women and their organizations are important to you. I am sure you have heard the old saying: "If you educate a man, you educate an individual, but if you educate a woman, you educate a generation."

My assignment from the AMA is to inform the women of the nation, through their organizations, about the medical profession and its organizations, both at the county and state and at the national level. It is my purpose to make sure the medical profession —you as individual physicians—get credit for and are identified with all the work you have done in the field of community health. So I tell them about the more than 100 AMA committees in the field of health education and community health, and I emphasize that many of the same activities are carried on at the county and state levels, too. I tell them about the 800 doctors across the nation who work on those AMA committees without pay, just because they are interested in promoting individual welfare and public health. I tell them about the other thousands of meetings that are held across this nation, at county and state levels, in addition to the more than 1,000 national ones that the AMA holds in various interest areas.

I show them many of the pamphlets that are published by the AMA. There are over 1,000 of them that are intended for the lay public. Then I tell them about the tremendous new AMA Biomedical Research Institute, it being the only institute in the free world that does not take government grants. It has been established in a country where all but 8 per cent of the money for medical research comes from one governmental agency or another.

The message I try to get across to these women's groups is very similar to the one printed on the last page of the little blue AMA pamphlet: "Medical societies across this nation strive to bring you the

highest quality medical care possible, and work in many ways to protect and improve public health. They carry out a wide variety of programs to overcome health problems, to encourage development of adequate health facilities, and to keep members of the professions and the public abreast of significant medical developments. They assure that medical ethics are maintained, that medical care is made available to all that need it, and high standards of health care are followed. They are happy to serve you in any way they can, and they welcome your inquiries." That last sentence, "They are happy to serve you in any way they can, and they welcome your inquiries," is a further clue to why I am here this morning.

Obviously you are not a women's organization, though I told you that my main and primary function is to address and work with women's groups. You see, even though I succeed in selling you to these women's organizations, my efforts will be productive only if you as physicians at the local level, whose stock I am selling, recognize that you have a philosophical and practical interest in those women's groups.

I should like to give you one or two of the reasons why you do have a practical interest in women's organizations at the local or community level. First of all, as I have already hinted, almost all of these women's groups have one community interest, the betterment of the community. Many times, nowadays, it has to do with health. The members work through their community service committees or health committees. They undertake projects and they conduct programs in this field.

Point No. 2. Because of this prevalence of health concern, you have a tremendous opportunity to develop a public mental reflex of turning to the doctors rather than to the government health officers or to the voluntary health agencies as reference sources. I shall give you an example. Just last winter I was able to get the health committee of a national women's service group to include venereal-disease eradication among the projects that it recommended to local chapters. That, as you know, is one of the AMA task-force undertakings.

I am trying to point out that though I can do this on the national level, you have a part to play, too. When women at the local level, as a result of what I have said, contact your county medical society or your state medical society and ask whether there are speakers available on this subject, or where they can get some of the AMA pamphlets to distribute, it is important for you to know why they are asking you these questions, and it is important for you to answer their questions and fill their requests. Those women have energies and a willingness that you can enlist in a tremendous program of health education.

Point No. 3. You are thus provided an opportunity to ensure that community health projects are weighed and selected on the basis of community need, and that they will be planned *with* the physicians, rather than without them, for I suggest that the women call their county medical society and find out what is the important health need in their community, before they undertake some project that may not be needed at the local level.

Point No. 4. Programs which indicate that medical research is dependent in part on the use of experimental laboratory animals, programs which demonstrate, perhaps, how county, state and regional facilities are utilized in the treatment of patients, or programs which illustrate the battle against quackery, we hope, may pave the way for physicians, at a later date, to educate the public toward a sensible, rational attitude toward legislation dealing with these matters. This is important. Many women's groups, this spring, are discussing the resolutions currently being proposed by various Congressmen on the subject of animal care, and we are battling mightily, at the national level, in this area. You may be able to help at the local level if you can present speeches that will give accurate information to these women.

Point No. 5. The medical profession seems to be more and more concerned about refocusing the public's mind so that people will see physicians as they really have been all along—dedicated to promoting the science and art of medicine and the betterment of public health. Then, the next time a vote of confidence is taken on you—the next time ballots are cast for legislators who are or are not proponents of the free-enterprise system and the free practice of medicine—we hope you will win. At least that is the theory under which we are working.

The only thing I ask of you is that, when these women contact you and ask for guidance, or ask questions that you can answer, you will recognize the importance of your giving them your guidance.

I can summarize, perhaps, by using a simile that may be appropriate in an agricultural state. I can liken my work to the plowing of a field. I can get it all ready, but it is up to you to sow the seeds of education, in the hope that later you can reap a crop of favorable, cooperative public opinion.

The presentation of Supplemental Reports was the next order of business. Each report was referred to the appropriate reference committee for study.

SUPPLEMENTAL REPORTS OF THE BOARD OF TRUSTEES

Supplemental Report A: General Activities

Presented by C. W. Seibert, M.D.
Chairman, Board of Trustees

(Referred to the Reference Committee on Reports of Officers.)

Before I start this report, upon behalf of the Board of Trustees and myself personally—and I want this made a permanent part of the record—I want to thank our Executive Vice President, Don Taylor, and his efficient and dedicated staff for the wonderful help they have given to us this year.

The year 1965-1966 will be recorded in IMS history as one of the most significant since it was established in 1850. The breakthrough which the social planners contemplated for several decades was finally accomplished in the passage of Public Law 89-97—the Medicare Law.

The Board of Trustees has had its busiest year of all time. Even though it is a slight exaggeration, it seems as though we have been in almost constant session since the Annual Meeting one year ago. The Board has met 25 times, 19 in regular session and six by telephone conference, in addition to the almost daily contact between individual members of the Board and various committee personnel and staff members.

We have been primarily occupied with matters pertaining to Medicare, and negotiations with Blue Shield. However, I should like to emphasize that the members of the Board of Trustees—the president, president-elect, vice-president, secretary, treasurer and three trustees—believe they must, and have assumed responsibility for coordinating and directing the many and varied activities of the IMS consistent with policies established by the House of Delegates and the Executive Council. Between sessions of the House, the Board and the Executive Council function in close cooperation.

Prior to the meeting, each delegate received a copy of the 1966 HANDBOOK, which contains reports from your officers, the district councilors, and the chairmen of all standing and special committees. In addition, many of these committees will present supplemental reports today. Members of the Board have been kept apprised of the tremendous amount of work that has been and is being performed by these committees and, when necessary and appropriate, the Board has offered its guidance and counsel in connection with the implementation of specific projects and programs.

As the saying goes, "The record speaks for itself"; so there is no need to reiterate what has already been reported to you. However, we believe it would be of interest and value to comment on a few of the major projects in which your officers have been intimately involved.

Medicare: Public Law 89-97—Medicare—finally was passed on July 30, 1965. Prior to that time the officers, various committees, staff—and the membership as a whole—directed their efforts toward defeating this legislation. That is now past.

Following enactment of the Medicare Law, we have done everything within our power to make this law as palatable as possible in the public interest as well as in the interest of the medical profession. For example, before P.L. 89-97 was officially enacted, the IMS, through numerous channels—including direct contact with congressional representatives and officers of the AMA and other state medical societies—made a strong appeal to Congress that any program involving payment for physicians' services by the government should include (1) usual, customary and reasonable fees, and (2) the right of a physician to abstain from participation if he elects to. Part B of Medicare includes these provisions.

Your officers have also maintained that the IMS should be an active participant in all phases of Part B of the Medicare Law which might affect the practice of Medicine. In this connection, we have been successful in establishing an excellent working relationship with the carrier in Iowa—which is, as you know, Iowa Medical Service (Blue Shield). Details of the IMS/Blue Shield relationship in reference to the implementation of Medicare will be presented to you as a part of the overall report concerning Blue Shield.

Usual and Customary Fee Survey: The Usual and Customary Fee Survey Committee is to be highly commended for its work in completing the monumental task of contacting every physician in the state to obtain information regarding his usual and customary fees for various medical and surgical procedures. The material compiled by the Committee was referred to the Board of Trustees, and a subcommittee of the Board, in consultation with Mr. Carl Tiffany, a Chicago actuary, developed recommendations regarding proper utilization and distribution of the results of the survey. These recommendations were subsequently approved by the Executive Council.

In essence, median and weighted-mean figures have been determined for 97 specified procedures, and it is felt that the survey data in this form can be of considerable value in negotiating usual and customary fee programs with third parties. The median represents that point where 50 per cent of the physicians report fees above and 50 per cent report fees below this median or midpoint. The weighted-mean represents an average fee for a procedure which takes into consideration or is weighted for the relative frequency with which it occurs.

Based on action of the Executive Council, the statistical data gathered in the survey is regarded as classified information, and is being retained in the IMS headquarters office. However, median and/or weighted-mean figures for any or all of the 97 designated procedures have been and are being provided to the presidents or secretaries of county medical societies on request. The same data may be obtained by a third party, if the request is considered valid. Information regarding a single procedure will be made available to individual physicians only at the Society's headquarters office. The Board of Trustees believes, and the Executive Council concurs, that limiting the distribution of the fee data will protect against the establishment of inflexible fee ceilings, not responsive to changing circumstances, and will preserve the concept of individual and customary fees. In other words, I am concerned only with establishing fair and reasonable fees for the services I provide to my patients, taking into account various factors which influence the fee which I ultimately determine. The fees of other physicians should be of no great interest or concern to me—whether they be higher or lower. This is the concept the Society is desirous of maintaining.

Your officers were gratified that, based on significant support of a resolution introduced by the IMS, the AMA House of Delegates in November reaffirmed the usual and customary fee concept as the basis for reimbursing physician participants in government programs at all levels, and recommended that this concept be extended to all third parties.

Suffice it to say that although the usual and customary fee concept may not be perfect, it affords the physician a greater amount of freedom in determining his fees than any other third party system.

Military Dependents Medical Program: In this connection, you should know that the Board of Trustees has advised officials of the Office of Dependents Medical Care of the Society's policy regarding application of the usual and customary fee concept to all third party programs, and that the Board intends to negotiate the ODMC Medicare contract on this basis. The present contract expires on July 31, and negotiations will be conducted prior to that time. Consistent with previous policy, if the Board is unsuccessful in negotiating a usual and customary fee contract, the Executive Council will be consulted before any final action is taken in reference to continuing participation in this program.

Heart Disease, Cancer and Stroke Amendments of 1965: The Board of Trustees has taken an active interest in all matters relating to Public Law 89-239—the Heart Disease, Cancer and Stroke Amendments of 1965. Dr. Ober, president, with Dr. Leinbach, president-elect, as his alternate, represent the Society on a Regional Advisory Committee which has been

formed to consider plans in connection with the submission of a planning grant application by the University of Iowa College of Medicine, under the provisions of the law. A survey is to be taken of the Iowa region to determine what services and facilities are already available insofar as carrying out the intent of P.L. 89-239 is concerned. The Board of Trustees has emphasized that the primary objective of this project should be to determine "need" only, and that a report be presented to the IMS after the survey project has been completed. The Board is aware of the inherent dangers of this program, and recognizes that it could threaten the traditional methods and concepts of the private practice of medicine. I assure you this program will be kept under close surveillance. Dr. Robert Hardin, dean of the University of Iowa College of Medicine, will provide you with further details regarding this project later this morning.

Miscellaneous: The term *miscellaneous*, as defined by Webster, means "consisting of a mixture; diversified; varied." There is probably no better word to describe the projects of the IMS, as implemented by your officers, committee personnel, and staff. I shall give you a few examples:

1. In August, 1965, each member of the IMS was provided for the first time a handy membership roster, which lists the name and address of each Society member, both alphabetically and by county.

2. The Society sponsored two outstanding conferences during the past year—the annual Fall Conference for County Medical Society Officers and Other Representatives on September 26, and a special Medicare Briefing Session for all Society members on February 6. In addition, the first statewide Congress on Medicine and Pharmacy, co-sponsored by the IMS and Iowa Pharmaceutical Association, was held on September 26, in conjunction with the Fall Conference program.

3. The Society has cooperated with several allied health organizations in developing special programs and conferences:

—It will serve as a co-sponsor of a special program on "Emergency Care of the Sick and Injured" along with the State Department of Health and the College of Medicine.

—It served as a co-sponsor of an Iowa-Nebraska program on the "Home Care and Management of the Physically Handicapped and Mentally Retarded."

—It assisted the Black Hawk County Medical Society, the Health Insurance Council, and the Health Care Council of Black Hawk County in developing plans for a forum on "Efficient Use of Health Care Resources."

—It serves as a co-sponsor of the Iowa Youthpower Project, which is designed to promote good nutrition habits among young adults.

4. Your officers and various committees of the Society maintain appropriate and continual liaison with the many and varied departments of state and federal government, with other state medical societies and national medical organizations, with allied health groups, and with many lay organizations. This liaison provides us an opportunity to be kept apprised of what problems are confronting others, and to enlist understanding, if not outright support, of Medicine's policies in reference to matters of professional and public interest.

5. In addition to the ODMC Medicare program, your officers, committees and staff are also involved in administering the programs of the Woman's Auxiliary, the Physician Placement Service, the Iowa Interprofessional Association, and the Iowa Medical Foundation. As will be reported to you in detail by the Chairman of the Ad Hoc Committee on Areawide Health Facilities Planning, we have also assumed leadership —and attending financial obligations—in creating the Health Planning Council of Iowa. We also take an active interest in the projects of the Iowa Medical Political Action Committee.

There is no need to elaborate further. You can readily see that the scope of activity and sphere of influence of the Iowa Medical Society is almost unlimited.

I should now like to call upon Dr. Kenneth Lister, trustee, who will provide information concerning the financial status of the Medical Society. Following his presentation, Dr. Jack Sunderbruch, trustee, will report on the new IMS headquarters building. I shall then conclude the overall supplemental report of the Board of Trustees by describing negotiations that have been carried on during the past year with Blue Shield.

Supplemental Report B: Finances

Presented by K. E. Lister, M.D., Trustee

(Referred to the Reference Committee on Reports of Officers.)

The 1965 IMS dues permitted the Iowa Medical Society to meet all of its financial obligations for the calendar year and still maintain an income in excess of expenses. For the year 1965, Society income exceeded expenses by $51,605.55. This is the first year since 1960 that income has exceeded expenses. When the Board of Trustees established the 1965 budget, it was agreed that of the $35 dues increase per member effective in 1965, $20 would be set aside for the financing of the new Society headquarters building. Excluding this $20 from the excess of income over expenses, the 1965 net income over expenses was approximately $8,000.00. The Board of Trustees feels the present dues structure will be adequate to meet expenses in 1967, and therefore recommends that IMS dues remain at the same level.

There are two additional items that require special comment. First we should like to call to your attention the matter of a proposed AMA dues increase. L. W. Swanson, M.D., senior delegate to the AMA, will now present a report (Exhibit a) concerning the proposed AMA dues increase.

PROPOSED AMA DUES INCREASE

L. W. Swanson, M.D., Senior AMA Delegate

This is the background information on the proposed AMA dues increase. You just heard from Dr. Lister the improvement in the Iowa Medical Society finances following a dues increase, and the AMA finds itself in essentially the same position.

The American Medical Association House of Delegates when it meets in Chicago, in June will take final action on a recommendation of the Board of Trustees to increase annual AMA membership dues by $25, from $45 to $70, effective January 1, 1967.

Cost of Doing Business. The American Medical Association is a not-for-profit professional scientific organization engaged in services to the medical profession and the general public. But the AMA is also a "business" organization—an employer and a proper-

ty owner—as inextricably caught as any other in the upward price spiral and as buffeted as any other by inflationary forces which have cut the purchasing power of the dollar by more than 50 per cent in the last quarter of a century.

Just as the costs of operating a physician's office have been increased, so have the costs of running the AMA. For example:

—A major activity of the AMA is communications, with about 30 per cent of the budget expended for paper, printing and postage. I think some of you are aware, too, that until several years ago the AMA did its own printing, and then found it could contract for printing cheaper than it could do it, so the AMA went out of the printing business at that time. In 1960, production of a typical page in its publications cost the AMA 11 cents. This year, because of increased and increasing costs, the AMA will spend 31 cents to produce that same page—an increase of more than 181 per cent.

—Between 1959 and 1964, AMA real estate taxes almost doubled.

—The AMA, obviously, must compete with private businesses in the market place for personnel, offering competitive salaries and a program of employee benefits.

—In 1960, Social Security taxes paid by the AMA totaled $160,000. This year, because of enactment of Medicare with added Social Security benefits, the AMA will pay $276,000.

AMA Membership. The present membership of the AMA is 210,938. Of this total, 165,712 are dues-paying members. Those who do not pay dues include interns and residents, physicians retired from active practice, those temporarily in military service, others who serve full time in the military or other government agencies, and some physicians who, because of accident or illness or for other reasons, have had their income partially or totally cut off.

Income and Expenditures. The AMA estimates that the gross income for 1966 will total $27,406,000. This will come from the following sources:

Advertising:	$12,362,000	(45.11%)
Membership Dues:	7,522,000	(27.44%)
Subscriptions:	2,307,000	(8.41%)
Exhibit Space:	600,000	(2.19%)
Investments:	193,000	(.70%)
Other:	4,442,000	(16.15%)

It should be noted that membership dues, now $45 a year, will produce less than 28 per cent of AMA income in 1966. If the AMA did not have other sources of income—and many associations do not—the current level of programs for the profession and the public would require annual dues of $165 per member. It is proposed to raise dues to $70 a year, increasing revenues from this source by about $4,143,000.

AMA dues compare favorably with those of other organizations. A Chicago newspaper reporter earning $9,000 a year pays $144 a year to the Guild. A pilot earning $20,000 a year pays $300 on a quarterly basis or $270 annually.

Members of the American Chiropractic Association pay $100 a year for general membership, plus additional dues to state organizations. Members of the other chiropractic group, the International Chiropractice Association, pay $195 a year, plus state organization charges.

Osteopaths pay $100 annual dues to their national organization, plus whatever is levied for state organizations.

The AMA budget for 1966 is narrowly in balance, after operating deficits totaling more than $1,000,000 were incurred in 1964 and 1965. I am sure you are all aware of the extraordinary programs that were paid for by that deficit spending, in those two years, in connection with our efforts to improve community health throughout the country.

The Need for Additional Revenue. It is the policy of the Association to try to maintain reserves sufficient to finance its essential programs for one year. AMA's liquid reserves now are approximately $8,000,000.

The growing physician population constantly adds to the Association's membership-service programs. Recordkeeping also increases. And more physicians generate new demands on the Association for continuing education.

The already substantial AMA program in the field of health education must be expanded in response to public demand.

The joint hospital accreditation program is constantly growing, and it will require even more resources with the addition of nursing homes in the accreditation program.

The enactment, in 1965, of a series of laws designed to give government vastly more power in the financing of health care has placed on the AMA additional obligations and responsibilities that cannot be met without increased revenue. I am sure you are all aware of how much time has been and is being spent by AMA officers and staff—you will hear more about it as the program goes on, at this meeting—in watching the development of Medicare, trying to improve it and trying to make it workable. All this has involved a great deal of time, effort and money.

Services to the Profession. What the individual physician gets from membership in the AMA depends partly on the physician himself. Some of the benefits are provided as a matter of routine; others are available for the asking.

For example, dues-paying members receive the weekly JAMA, their choice of one of the 10 specialty journals, a reception room copy of TODAY'S HEALTH, and THE AMA NEWS. Thus without additional cost, their $45 in dues brings them subscriptions valued at $34. Many other services are provided which are simply costing more money.

This report is provided for information only, and no action is required.

RESUMPTION OF SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES, PART B

Dr. Lister

The second item is the fiscal picture of the JOURNAL OF THE IOWA MEDICAL SOCIETY. For several years, expenses for publishing the JOURNAL have exceeded income. This was true again in 1965. This was not due to any measurable increase in publishing costs, but rather to a continued marked decrease in advertising revenue. The Board feels that every effort is being expended to place the JOURNAL on a sound fiscal basis. During the past year the president appointed a special committee, composed of the president, president-elect, immediate past-president, a trustee and the scientific editor of the IOWA MEDICAL SOCIETY JOURNAL to explore fully the status of the IMS JOURNAL. Members of the committee considered in some depth various proposals looking forward to a more favorable fiscal JOURNAL

picture. Explorations have included an attempt to cooperate with neighboring states in the publication of an area journal. The HANDBOOK report of the Publication Committee comments on the status of the JOURNAL OF THE IOWA MEDICAL SOCIETY. We hope each member of the House of Delegates will read very carefully the Handbook Report of the Publications Committee. Information on the efforts of the special joint study committee to accomplish its assigned task is included in the delegates packet (Exhibit b). More detailed information will be available at the Reference Committee hearing this afternoon in addition to complete information on the JOURNAL income and expenses for 1965. Members of the Board of Trustees will be in attendance at the hearing of the Reference Committee on the Reports of Officers to answer questions regarding the Society's financial affairs.

It is now my pleasure to call upon Dr. John Sunderbruch, a trustee, who will present Part C of the Board of Trustees Supplemental Report, on the new IMS headquarters building.

Supplemental Report C: Building Project

Presented by J. H. Sunderbruch, M.D., Trustee

(Referred to the Reference Committee on Reports of Officers.)

It is my distinct pleasure today to report to the 1966 House of Delegates the official completion and occupancy of the new Iowa Medical Society Headquarters Building. As you know, the new building is located at Tenth Street and Grand Avenue in West Des Moines; more precisely, at 1001 Grand Avenue, West Des Moines.

This handsome structure represents the culmination of some extensive and careful planning—planning which began in 1962 when the House of Delegates authorized the Board of Trustees to investigate new and more adequate facilities for the headquarters of the Iowa Medical Society.

The building was occupied on February 21. Those who have visited it since that date—both Society members and others—have been most generous with their compliments. A number have commented that the building in and of itself exudes a genuine feeling of dignity and stability, qualities certainly of utmost importance to the medical profession. This feeling we hope and we believe stems from the conscientious effort which has been made to keep the building functional and in good taste, yet devoid of ornateness.

Location is an all-important factor in the planning of a new facility, and those who have had a part in the development of this building believe its site is an excellent one. A word or two should be said about access to the new Headquarters Building, for it is our earnest hope that a larger number of Iowa physicians than ever before will have an opportunity to visit and use this structure. Interstate Highways 35 and 80 are within close proximity of the building for those who come by car. The recent completion of Sixty-third Street, south from Grand Avenue, provides good access to the airport. And the Des Moines Freeway, completed in part, eventually will furnish rapid movement to and from downtown Des Moines and the Statehouse.

Before I show several slides of the new Headquarters Building, it is appropriate to report to you some good news with regard to the disposition of the Thirty-sixth Street building. The Board of Trustees was pleased to consummate the sale of this building prior to vacating it. It was purchased by the Iowa Heart Association, and the sale price was such that the Society realized a reasonable capital gain.

I should now like to give you some idea of the building's appearance by means of some pictures which have been taken within the past few days.

Slide No. 1: This is an exterior view of the front of the building. Two well-established sycamore trees flank the front entry and overhang a circular drive. An ivy or ground cover has been planted in the area adjacent to the front of the building and will provide a distinctive appearance. The building's exterior is of a harvest-brown Norman brick, accented by columns of quartz-aggregate concrete. Lights have been installed below ground in the front of the building to shine upward onto these columns; this provides a striking after-dark effect.

Slide No. 2: This exterior picture is taken from the back of the building to illustrate in part the large amount of parking space which is available. This, as you will recall, was a very limited item at our former quarters. Space for 50 cars is available at the new building. The building, incidentally, is square, 78′ by 78′, and has 12,168 square feet.

Slide No. 3: Moving inside the building we first look at what undoubtedly will be regarded as the piece de resistance—the Bierring Memorial Room. In a meaningful manner yesterday afternoon this room was dedicated to the memory of Dr. Walter L. Bierring. You have in your packets a folder which describes this dedication program; this folder also reviews in brief the career of Doctor Bierring and the effort expended to make this memorial a reality. A portrait of Doctor Bierring, painted by Mrs. Cloy Kent of Iowa City, was commissioned by the Medical Library Club of Des Moines, and it will hang in the Bierring Room above a case in which appropriate memorabilia will be displayed. We are pleased to have the portrait in the room this morning for you to see. The Bierring Memorial Room will be used as a conference room in addition to providing working space for physicians visiting the building. A conference table has been placed in the Bierring Room by the Scott County Medical Society; Davenport was Doctor Bierring's birthplace. Other gifts, large and small and too numerous to mention, have been received over the past several years, and each had a part in bringing the Bierring Memorial Room to fruition. I believe I can speak for the state's medical profession in saying that we are most gratified to have this tribute to such an outstanding Iowan as part of the new Society building.

Slide No. 4: This slide shows the front entry where the receptionist is stationed. A number of visitors to the building elect to use the parking area in the back, and then, of course, enter through the rear door. These persons will be directed to the front of the building for assistance by means of a sign board, similar in appearance to those found in many building lobbies. This board will also be used to designate the room location of meetings scheduled on a particular day. There are stairways to the lower floor at both the front and back of the building.

Slide No. 5: The center portion of the building's ground floor serves as an open stenographic and file area. Individual offices surround this clerical area on the perimeter of the building.

Slide No. 6: This is one of three virtually identical offices along the north side of the building. Space around the perimeter of the building's ground floor is taken up by the Bierring Memorial Room and the

offices of the executive vice-president, the JOURNAL, the membership secretary, the field secretary, the Iowa Medical Foundation, the Military Dependents' Program and other staff members.

Slide No. 7: The lower level of the building contains a workroom, several storage areas, a small kitchen, machine and equipment rooms, and two additional meeting rooms. This is the smaller of the two conference rooms and will accommodate between 16 and 25 persons. To illustrate the need for several meeting areas, I might point out that on one day within the past two weeks, meetings of the Osteopathic, Public Assistance and Safe Transportation Committees were going on simultaneously at the building. This is not unusual.

Slide No. 8: This is the building's large conference room. It will be used for meetings of the Executive Council and will normally be arranged to accommodate from 40 to 50 persons. The room will seat between 175 and 200 persons with a theater-style arrangement.

Slide No. 9: Looking finally at another exterior view, you will recall that the new Headquarters Building rests on about half of a three-acre site owned by the Medical Society. Interest has been expressed from several sources in this land which adjoins the building site to the east. The Board has adopted the attitude that it will proceed cautiously in the consideration of the sale of this adjoining property in the belief that its value will increase appreciably with the passage of time.

This then is a glimpse at the new building. While we are reluctant to do anything which might interfere with the General Sessions of the Annual Meeting, which occur on Monday and Tuesday, we do feel obligated to have the building open on these two days. Those of you who may wish to slip away for a few minutes will find the building open between 9 and 11 a.m. and again between 2 and 4 p.m. on these days. We would encourage you to consider planning a visit to the building at a time after the Annual Meeting when members of the staff will be present to make your call more meaningful. However, we certainly do not mean for you to stay away during the next several days if you prefer to see it now.

The 1964 House of Delegates, in affirming the actions taken by its two immediate predecessors, authorized the appointment of a Building Committee to work under the supervision of the Board of Trustees. This Committee has done a yeoman job in following the construction work. Particular commendation we believe is due to a pair of Des Moines physicians, Dr. John Gustafson and Dr. Dwight Wirtz, for their expert advice and counsel.

Previous reports have been made to the House of Delegates on matters relating to the cost of the new Headquarters Building. The lower bidder and general contractor for the project has been the Weitz Company of Des Moines. I shall suggest that if any members of the House are interested in a review of this or other information, a member of the Board of Trustees will be present at the appropriate Reference Committee to answer questions.

Plans for the dedication of the new Headquarters Building have been formulated and we are enthused about those activities which have been developed for the coming year. Dr. Leinbach will speak in greater detail on this subject at the Wednesday session of the House of Delegates, and you will be supplied with material which will describe the dedication activities. Thank you for your attention.

Dr. Seibert will now complete the report of the Board of Trustees with Supplemental Report D.

Supplemental Report D: Blue Shield

Presented by C. W. Seibert, M.D.
Chairman, Board of Trustees

The final portion of the Board report will be divided into two sections, as follows:

Section I: General IMS/Blue Shield Relations, including a report from Blue Shield regarding revisions in existing contracts and other related matters.

Section II: IMS/Blue Shield Relations in Reference to Implementation of Part B—P.L. 89-97—Medicare.

Section I: General IMS/Blue Shield Relations.

(Referred to the Reference Committee on Blue Shield.)

At the 1965 Annual Meeting, the House of Delegates made the following recommendations:

1. That the Iowa Relative Value Index, in all of its editions, be replaced with county usual and customary fee ranges as soon as and wherever possible in new and existing Blue Shield contracts.

2. That the Blue Chip contract be re-evaluated, renamed, and/or rewritten; and that the contract implement the usual, customary and reasonable fee concept.

3. That county review committees be utilized, and their effectiveness evaluated, using as the basis for determining usual, customary and reasonable fees the ranges of fees that will be available from the IMS as a result of the recently completed fee survey.

4. That if the usual and customary fee program can be made to function in the best interests of all parties, consideration be given to introducing an income ceiling, perhaps at $7,500, below which benefits would be provided based on the usual and customary fee concept, and above which Blue Shield members would be indemnified and physicians could make an additional charge.

5. If it became necessary for Blue Shield to provide a $7,500 service income level contract in order to continue participation in the Federal Employees Program, that a special session of the House of Delegates be called to consider it.

The Board of Trustees is very pleased to report that during the past year great progress—almost unbelievable progress—has been made in improving and enhancing IMS/Blue Shield relations and successfully negotiating, in general, the recommendations made by the House last year.

On September 9, 1965, the Executive Council approved revisions to the IMS/Blue Shield Memorandum of Understanding. The revisions were made in response to a recommendation from the Insurance Commissioner that language in the Memorandum be clarified relative to the separate corporate authority of Blue Shield. The revised version was also approved by the Blue Shield Board of Directors.

The Memorandum of Understanding, coupled with the Joint Statement of Intent, which was approved by the House of Delegates in 1965, appear to be adequate in terms of establishing and maintaining proper rapport and liaison between the Society and Blue Shield.

You will recall that although the Memorandum of Understanding is concerned primarily with voting and election procedures, it also includes a broad directive

for consultation between the IMS and Blue Shield on all matters of mutual concern.

The Joint Statement of Intent is concerned primarily with specific areas in which mutual understanding is to be consummated between the IMS and Blue Shield: i.e.,

—when new Blue Shield contracts are being considered.

—when changes or new interpretations of existing Blue Shield contracts are contemplated.

—when changes are proposed in reference to the philosophy and technique of paying claims.

—when information comes to light disclosing abuses of the Plan.

Culminating a series of conferences between IMS and Blue Shield officials during the past year, the IMS Board of Trustees and the Executive Committee of Blue Shield met on Tuesday evening, April 12, to review actions taken by the Blue Shield Board of Directors in reference to the Blue Chip and other Blue Shield contracts.

I am now privileged to introduce Dr. George Scanlon, a past-president of the Society and chairman of the Blue Shield Board of Directors, who will, assisted by Mr. William Guy, acting executive director of Blue Shield, bring you up-to-date on these Plans. These reports are included as Exhibit (c) and Exhibit (d) of the Supplemental Report of the Board of Trustees—Part D.

G. H. Scanlon, M.D., Chairman
Blue Shield Board of Directors

To any of you who suffer under any illusion that real accomplishments come about magically and without real work and effort, let me say that you are painfully mistaken.

I am not going to belabor you with a long dissertation on the hours and work spent by the chairman of the Board of your Blue Shield Plan during the past couple of years but instead I am going to call on Mr. Guy to outline for you the results of some of this labor.

Naturally, I am tremendously pleased with the report Mr. Guy will be making to you today. In my humble opinion it puts Blue Shield back "on the tracks." The train is running again, and although I assure you in advance it cannot be all things to all people, it does nevertheless give us a program which we can all strive to perfect as it moves along.

With the very significant cooperative effort that has now developed between your Iowa Medical Society and your Iowa Blue Shield Plan, I am sure perfection is within reach. We have the communication lines established—we have the desire—we have the know how—and I am sure we will gain and earn your support.

Yes, the train is moving—on track—as I am confident you will agree as you listen to Mr. Guy's report.

William A. Guy
Acting Executive Director
Iowa Medical Service

Let me start my report with an apology—the report will be a bit lengthy—I am sorry for this, but on the other hand, it is unavoidable for we have a great number of things to discuss with you today.

I should like to start the report by expressing my sincere gratitude to the various committees who have been working with me and, of course, the Blue Shield Board—they have worked and labored long in counseling with me during the development of the program. A special debt of gratitude is owed to the staff of the Iowa Medical Society, and especially to the Board of Trustees—they provided the incentive; they willingly carried their end of the "stick"; they did not fail a single time to provide the counsel that was so essential to the undertaking. Not one time did I hear anyone gripe about the work or time that it was necessary to spend in the development of the program. I am sure a part of this was a feeling of being caught up in a forward motion that promised some real accomplishments; at least, I hope this is so.

I should now like to review each item of my report in some detail.

I. Blue Shield By-Law Amendments: The Blue Shield By-Laws have been amended to correct some of the weaknesses in the election process for the Blue Shield Board of Directors.

II. Medicare Complimentary Coverage—A. Blue Cross-Blue Shield 65: Blue Shield is now offering complementary coverage to fill the "gaps" in Part B as it deals with those services traditionally offered by Blue Shield—this, in effect, is continuing to offer the same type of Blue Shield coverage we have always offered but not duplicate payments made under the Medicare program. A maximum payment on the part of Blue Cross and Blue Shield is established in the total complementary coverage offering equal to $10,000 per calendar year and $20,000 lifetime maximum.

B. Blue Shield Coverage for Those Electing Not to Participate in Part B of Medicare. Blue Shield plans to offer the B"450" contract containing a service level of $1,500 and net worth level of $10,000 for those people who elected not to participate in the Medicare Part B coverage. We chose the B"450" to recommend because of its fairly high level of payment. We do not anticipate a large market for this coverage. We do feel, however, that a contract must be offered, if for no other reason than permitting the person to have Blue Shield coverage if he does not wish to enroll in Part B of the Medicare Plan. The subscription rate for this Blue Shield-only contract will be $6.80 per person per month.

We also plan to offer or permit the sale of the various Blue Shield contracts either alone or with Medicare "carve out" to large buyers who absorb the experience in their own group (experience rated) where it is essential for the retention of the business, and also in National contracts where a uniform program is needed. This would provide the flexibility needed to protect this market for Blue Shield.

III. Pathology and Radiology: I would like to have my report on this item include the text of the committee's report to the Blue Shield Board. It was as follows:

At the January 23, 1966, Board of Directors meeting, Dr. George Scanlon, chairman of the Board, appointed a committee, consisting of Dr. Layton, chairman, Drs. Linder, Devine and Young and Mr. Paul Keiser to review the entire question of Blue Shield payments for pathology and radiology services, and asked the committee to make a new attempt to reconcile the current problems existing in this area, and if possible, present specific recommendations to the next meeting of the Board, which he indicated would be a special meeting called for late March, 1966.

This report of the committee's work and activities is not intended to document the problems that exist, since it is the feeling of the committee that the prob-

lem has been rather adequately documented in the past and that no useful purpose could be served by a complete rehash of the problem or the past.

Following the January 23 Board meeting, Mr. Guy, acting executive director of the Plan, held several informal meetings with pathologists, hospital administrators, Blue Shield Board members, Iowa Blue Cross Plan executives, etc., and from these meetings developed an approach to the problem, which he reviewed in some detail with the chairman of the committee, Dr. Layton, on February 6, 1966.

Dr. Layton and Mr. Guy then developed a specific approach to the entire program and arranged informal meetings with a small group of pathologists and a few members of the staff at the University Hospitals in Iowa City (medical and lay). Following these meetings, a full committee meeting was called for February 16, 1966, in Iowa City.

At the committee meeting on February 16 (Drs. Layton, Devine, Linder and Hawkins and Messrs. Keiser and Guy were in attendance), the proposed approach to the payment of pathology and radiology services was presented as follows:

Discontinue all x-ray and laboratory schedules under all Blue Shield contracts and pay for these services as billed by the pathologists or radiologists and mutually agreed upon by the hospital and the doctor.

From a philosophical base this seemed highly desirable; therefore, the committee went on to review the political-legal (control) problems involved, and in reviewing this area, Mr. Guy stated that he felt adequate control was exercised when the following areas were brought into play.

1. The market place itself—certainly we must start from the premise that charges to Blue Shield would not be higher than to the rest of the patient population, and since Blue Shield does not have all residents enrolled, a proper degree of control would always be maintained by pressures of the market place itself.

2. The medical staff—it is recognized that if a given pathologist or radiologist and the hospital set their charges well above comparable charges being made by other pathologists and radiologists and hospitals, the medical staff would let their "restlessness" be known and felt as they received the complaints from their patients.

3. The pathologists and radiologists' group—each group offered full cooperation and assistance—offering to form committees as needed and required or requested by Blue Shield to review and, where necessary, arbitrate problems.

4. Blue Shield's right *not* to contract—it is recognized that Blue Shield does have the basic right to refuse to contract with a pathologist or radiologist, if it feels such action is necessary to preserve its financial, moral or social integrity. If Blue Shield should find it necessary to refuse to contract with a given pathologist or radiologist, Blue Shield would then pay for services rendered by such non-participating pathologist or radiologist in accordance with a schedule, and such payments would be made directly to the subscriber. A $5.00 conversion factor would be used in these instances.

5. As the final method of control, it was pointed out that Blue Cross at the present time receives certain monetary advantages through its cost reimbursement program with its hospitals, at least, when charges exceed the allowable cost. It was felt Blue Cross would be agreeable to considering the possibility of refunding to Blue Shield the differential received by Blue Cross in application of the cost reimbursement formula equal to the proportionate amount paid by Blue Shield for the charges made for pathology and radiology.

Next, I indicated that the market must be considered, since plans or programs may answer a philosophical or political test, but if they did not meet the test of the market place, they would be of little avail. It was felt Blue Shield would not be in any problem in the market place with this approach and, in fact, could be in a better position than at present. Certainly this would avoid separate and additional billings to the subscriber for services he thought he was prepaying in full. Historically, the subscriber to Blue Cross and Blue Shield has expected, and virtually demanded, that services for x-ray and laboratory be on a "service benefit" basis.

The Committee considered and discussed this proposal in detail and also reviewed at this time the comments submitted by Mr. Irwin. During this discussion, the following specific points were made and, in effect, become a part of the proposal.

1. The contract between Blue Shield and Blue Cross that was entered into at the time these services were transferred to Blue Shield responsibility, would, of necessity, have to be rewritten.

2. Blue Cross would be requested to consider and urged to adopt a policy of refunding to Blue Shield a proportionate share of any advantage received through the Blue Cross cost reimbursement formula with its hospitals.

3. The program be instituted June 1, 1966—this to allow time for any non-participating physician pathologist or radiologist to become a participating physician.

4. Non-participating physician pathologist or radiologist to be paid his charges or in accordance with a fee schedule providing a $5.00 conversion factor, whichever is less.

5. Schedules are still to be filed with Blue Shield, and Blue Shield is to be given 30 days' advance notice before any change.

6. Radiology is still to be itemized on all billings submitted to Blue Shield, but pathology need not be itemized, unless it is the desire of the pathologist or hospital to do so.

7. Blue Shield auditors to continue their auditing of hospital records dealing with payments made for pathology and radiology services as the need for such audits dictates.

It was the general consensus of the Committee that the program held a great deal of merit and should now be submitted with recommendation for its acceptance to the full Blue Shield Board, but the Committee suggested that the program first be discussed with a group representing all interested parties, including the two specialty groups involved, the Iowa Hospital Association, the Iowa Medical Society and both Blue Cross Plans. Mr. Guy was asked to arrange such a meeting for March 10, 1966, in Des Moines. At the meeting on March 10, held in Des Moines, the following persons were in attendance:

Iowa Medical Society

Dr. C. W. Seibert, Chairman of the Board
Dr. Frank G. Ober, President
Mr. Donald Taylor, Executive Vice President

Iowa Hospital Association

Mr. Roland Enos, President
Mr. Cletus Turnbach, President-Elect
Mr. Harris Feldick, Chairman, Iowa-South Dakota, Blue Cross-Hospital Advisory Committee
Mr. Lloyd Coe, Executive Director

Blue Cross
Mr. Jack Dowd, Chairman of the Board, Sioux City Blue Cross
Mr. Donald W. Happe, President, Sioux City Blue Cross
Mr. Paul G. Norris, Jr., Chairman of the Board, Des Moines Blue Cross
Blue Shield
Dr. Charles P. Hawkins, President
Radiologists
Dr. Louis Maher
Dr. John Bacon
Pathologist
Dr. John Green
Blue Shield Pathology and Radiology Committee
Dr. Jack M. Layton, Chairman of Committee
Dr. Arthur W. Devine
Dr. George G. Young
Dr. Enfred E. Linder
Mr. Paul H. Keiser
Blue Shield Staff
Mr. William A. Guy
Mrs. Shirley Dickey

Dr. Layton, acting as chairman of the meeting, opened the meeting with a warm welcome extended to all in attendance and briefly outlined the purpose of the meeting and how it had come about—he then asked Mr. Guy to review the program.

Mr. Guy reviewed the program as it is contained in this report, following which the group entered a general discussion.

1. Mr. Norris and Mr. Dowd indicated general agreement with the suggestions it contained regarding the Blue Cross role and found the proposal quite satisfactory as far as Blue Cross was concerned.

2. Mr. Enos, speaking for the hospital group, indicated general approval and support on the part of the hospitals.

3. Both Dr. Seibert and Dr. Ober spoke generally in favor of the program.

4. The pathologists and radiologists indicated extreme pleasure with the content of the program and pledged their support.

This program was recommended to the Board of Directors of Blue Shield and was approved by them on April 6, 1966.

IV. Blue Chip: Here again, I should like to use the Medical Advisory Committee report to our Blue Shield Board as the report to this meeting:

On February 24, 1966, a meeting of the Medical Advisory Committee was held to review with Mr. Guy several suggestions he had dealing with physician payments under all Blue Shield contracts, but with particular reference to the Blue Chip contract. Dr. Kuhl, chairman of the Committee, presided at the meeting, at which Drs. Wilcox, Kuehn, Ellyson, Merkel and Hawkins were in attendance, in addition to Mr. Guy and Mrs. Dickey of the Blue Shield staff. Mr. Guy made the following recommendations:

1. Blue Chip contract—effective June 1, 1966, start to administer the Blue Chip contract by paying the individual physician's usual and customary charge for services under the Blue Chip contract.

a. If this procedure is adopted, recognize the basic right of Blue Shield to contract or not contract with a given physician, but before making any final decision regarding termination of a participating physician's contract, Blue Shield to seek specific advice and consultation through the Iowa Medical Society committee structure.

b. Payment for services rendered by nonparticipating physicians would be made at a $5.00 conversion factor.

c. The contract must be rated to stand on its own—in other words, the contract would not be subsidized by any other contract on the basic premise that if the person wants to prepay his coverage on this basis, he must pay the premium necessary to provide those benefits.

The committee discussed these suggestions in detail, and indicated general agreement with the philosophy and concept as expressed in the suggestions. The committee asked Mr. Guy to arrange a meeting with representatives of the Iowa Medical Society to explore the subject further and in more detail before the special meeting of the Blue Shield Board.

The meeting requested was arranged and held on March 17, 1966. Dr. Kuhl presided at the meeting which was attended by Drs. Rhodes, Sunderbruch, Schlaser, and Messrs. Taylor and Huston, representing the Iowa Medical Society; Drs. Kuhl, Kuehn, Ellyson and Merkel of the Medical Advisory Committee; Dr. Hawkins, president of Blue Shield, and Mr. Guy from the Blue Shield staff.

Dr. Kuhl and Mr. Guy reviewed with the group the suggestions that had been considered by the committee. The group was in general agreement on the approach suggested for the Blue Chip contract and indicated a desire to see the name of the contract changed.

The recommendations as approved by the Medical Advisory Committee were submitted to the Blue Shield Board of Directors at its meeting on April 6, 1966, and were approved as recommended. The Board also approved changing the name of the Blue Chip contract to the BLUE SHIELD COMPREHENSIVE CONTRACT.

V. All Other Blue Shield Contracts: The same committee reviewed and reported on this subject as handled the Blue Chip contract. Their report to the Blue Shield Board was as follows:

Mr. Guy made the following recommendations regarding the approach to be followed on all other Blue Shield contracts.

1. Develop with the Iowa Medical Society a standard unit value schedule that would then be used for all contracts and apply a different conversion factor to the various contracts issued. Each dollar of conversion to carry $1,350 in family "service" income ($900 for single subscriber) and ten times that amount in net worth "service." (See Attachment A.)

2. The Iowa Medical Society will be asked to accomplish this work within 30 days of the date of Blue Shield Board action.

ATTACHMENT A

Conversion AMOUNT	*Single Service* INCOME LEVEL	*Family Service* INCOME LEVEL	*Single Service* NET WORTH LEVEL	*Family Service* NET WORTH LEVEL
$3.00	$2,700	$4,050	$27,000	$40,500
(Sub. Contract would specify)	$2,800	$4,000	$27,000	$40,000
$4.00	$3,600	$5,400	$36,000	$54,000
(Sub. Contract would specify	$3,600	$5,400	$36,000	$54,000
$4.50	$4,050	$6,075	$40,500	$60,750
(Sub. Contract would specify)	$4,000	$6,000	$40,000	$60,000

SUGGESTED CHANGES IN SUBSCRIBER CERTIFICATES
BLUE SHIELD

ATTACHMENT B
Effective July 1, 1966

Item	*Present Certificates*	*Proposed Certificates* GROUP	DIRECT PAY (NON-GROUP)
Definition of Physician.	Code of Iowa—Chapters 148 (MD), 150 (DO) and 153 (DDS) in newer certificates.	Code of Iowa—Chapters 148 (MD), 150 (DO), 153 (DDS) and 149 (Podiatrists).	Same as Group.
Two-Person Contract—covers subscriber and spouse or subscriber and only child.	Yes.	Definition deleted but 2-person rate will not be discontinued until next rate adjustment.	Same as Group.
Definition: Medicare—"Medicare" means programs established by Public Law 89-97 (commonly called the "Social Security Amendments of 1965") and amendments thereto, and regulations promulgated by the Social Security Administration or other governmental agencies for the administration of this law.	Not included.	Included.	Included.
Dependent Coverage.	Unmarried dependent children to age 19.	Each unmarried dependent child under 19 years of age, each unmarried dependent child who is a full time student at an accredited college or university or an approved school of nursing regardless of such child's age and each unmarried dependent child who is totally and permanently physically or mentally disabled regardless of such child's age.	Same as Group.
Days Coverage—in-hospital medical care.	70 except "Blue Chip" which has dollar maximum rather than days.	365 except "Blue Chip" which has dollar maximum rather than days.	120 except "Blue Chip" which has dollar maximum rather than days.
Obstetrical Services Waiting Periods.	Date of conception. 270 days.	270 consecutive days—waiting period does not apply to premature termination if full term delivery would have occurred after 270 days.	Same as Group.
Anesthesia Service—if administered by other than qualified doctor, 50 per cent of scheduled anesthesia fee shall be paid.	Included in Plan B "300G" and Plan B "450." Excluded in Plan B "300" and Plan B "400."	Included.	Included.
Accidental Injury—from time of injury unless fracture or dislocation.	48 hours.	72 hours.	72 hours.
Sterilization.	Excluded.	Covered.	Covered.
Beautifying and Cosmetic.	Excluded.	Covered for correction of defects incurred through accidental injury sustained while covered by contract.	Same as Group.
Dental Services.	Excluded.	Dental services if hospital confinement necessitated for removal of impacted teeth, plus services that Blue Shield has been providing.	Same as Group.
Commencement of Benefits for Member Hospitalized on Effective Date of Contract.	Effective date of contract (except for regular contract waiting period for existing conditions).	Benefits may not commence until after discharge from hospital.	Same as Group.
Coordination of Benefits—non-duplication.	No.	Yes.	No.
Subrogation.	No.	Yes.	Yes.
Exclusions.—A. Hospital care, dental service or nursing service. B. Non-surgical medical care in a home or in a doctor's office including immunizations and administration of drugs and medicines. C. The cost of medicines, drugs, serological products, devices, appliances, eye glasses, materials or supplies, blood or blood plasma, false teeth, crutches and artificial limbs and the fee paid blood donors.	Included.	Not listed as exclusions (have exclusions for any services which are not professional services and an exclusion for any item not listed as a benefit).	Same as Group.
Medicare Exclusion—excludes professional services if the member is entitled to have any part of the cost thereof paid by Medicare even though the member does not enroll in Medicare and waives or fails to claim Medicare benefits.	No.	Yes.	Yes.

Item	Present Certificates	Proposed Certificates	
		GROUP	DIRECT PAY (NON-GROUP)
Exceptions to Full Service—private room when not necessary.	Included.	Excluded.	Excluded.
Rate, Term and Termination Subscription Rates—the subscriber agrees to pay Iowa Medical Service the monthly rates then in force for coverage provided. Iowa Medical Service reserves the right to change the rates on thirty (30) days' written notice to the subscriber. Such change of rates shall become effective on the date fixed in the notice.	Included.	Same except provision has also been made to change rates on 30 days' notice to Group.	Same as Group.
Term and Termination.	Either Blue Shield or subscriber must give notice 30 days prior to termination date.	Basically same except Blue Shield may also terminate by notifying group 30 days prior to termination date.	Same as Group.
Termination for Failure to Pay Dues—failure to pay the monthly rate when due shall cause the contract to terminate as of the date of default of such payment and no benefits to be available except that a member who is actually receiving service at such date of termination shall receive the benefits for that service.	Included.	Basically same except benefits after termination date are limited to hospitalized medical care for members confined on termination date and continue to the earliest of the following: (1) exhaustion of days coverage; (2) discharge from hospital; or (3) 60 days from termination date.	Same as Group.
Termination—cessation of benefits for member hospitalized on termination date.	Hospitalized medical care provided until discharged from hospital or until days coverage exhausted whichever first occurs.	Hospitalized medical care provided for the lesser of (1) through date of discharge from hospital; (2) exhaustion of days' coverage; or (3) 60 days.	Same as Group.
Member Eligible for Medicare—the subscriber shall notify Blue Shield within thirty (30) days following the date either the subscriber or his spouse becomes eligible for professional medical service benefits under Medicare. Coverage for a member under this contract shall cease on the date such member becomes eligible for professional medical service benefits under Medicare. The acceptance by Blue Shield of payments for persons no longer eligible for benefits hereunder shall not obligate Blue Shield to provide such benefits.	Not included.	Included.	Included.

3. The Iowa Medical Society will be asked to maintain an active committee to review and act on all suggested changes in the unit value schedule, since it is recognized that changes would undoubtedly be necessary as time goes on, if for no other reason than changes in medical practices.

At the meeting of March 17, 1966 (which was referred to under discussion of the Blue Chip contract), the group also discussed these recommendations.

The group found the formula approach very desirable, but suggested that the top contract to be offered by Blue Shield carry a family service income level of $6,000 other than the full service (Blue Chip) contract. It was, therefore, agreed that the formula approach should be suggested to the Blue Shield Board with use of the formula up to a family service income level of $6,000. Use of the "net worth" factor in all of these contracts was also found desirable.

The recommendations were submitted to the Blue Shield Board of Directors at its meeting on April 6, 1966, and approved as recommended.

VI. Change in Present Blue Shield Subscriber Contracts: Early in February, a decision was made to reissue all Blue Shield contracts effective July 1, 1966, because some of the problems that would be encountered if Blue Shield did not have a specific Medicare exclusion in their contracts. With the necessity of reissuing all subscriber contracts, it was felt desirable to make any and all additional changes desired or needed in the Blue Shield subscriber contracts at that time.

Some of the changes suggested are merely an attempt to clarify the provisions of the contract, and during the work-up of the new contract, every attempt was made to gain as much consistency as possible with the two Blue Cross Plans in approach, wording and interpretation. Further, it seemed obvious that competition would become keener after the advent of Medicare and, therefore, it seemed an appropriate time to make some changes in subscriber benefits that had been discussed on previous occasions and which seemed highly desirable in placing Blue Shield in a more favorable competitive position. All of the subscriber contract changes are enumerated in Attachment B.

These changes were approved by the Blue Shield Board of Directors on April 6, 1966.

I feel I should apologize again for taking so much of your time in reviewing all of these rather *minor* Blue Shield changes, but I am really not going to, because somehow I hope you will agree with me that it has been time well spent.

CONTINUATION OF SUPPLEMENTAL REPORT D: BLUE SHIELD

Dr. Seibert

Mr. Guy mentioned in his report that Blue Shield is desirous of abandoning use of the many and varied relative values indexes in favor of one that would be applicable to the various low-income service level contracts. Consistent with this, the Society was asked at the Joint IMS/Blue Shield meeting on April 12 to make available to Blue Shield at the earliest possible date an index that would be acceptable to the Society and its members. We believe the Society should do all it can to cooperate and assist Blue Shield in updating and re-issuing its existing contracts by July 1, 1966. Therefore, it is the recommendation of the Board of Trustees that the Iowa Relative Value Index (Green Book) approved by the House of Delegates in May 1962, be utilized by Blue Shield in administering the service level contracts, with the understanding that a committee of the Society be directed to begin work at once to revise and update the Green Book. We believe this is a tremendous step forward in putting some of the outdated plans of Blue Shield on a current basis, and will eliminate a tremendous amount of confusion by physicians and their office assistants in ascertaining Blue Shield payments under these service level programs.

The remaining proposals just presented have been carefully considered by the Board of Trustees, and the Board strongly recommends that they be adopted by this House of Delegates.

The Board of Trustees also believes that it is important to maintain liaison with officials of Blue Shield on a continuing formal basis, and, as Society officers, we intend, by mutual agreement with Blue Shield, to meet in joint session with the Blue Shield Executive Committee to discuss matters of mutual interest and concern.

Section II: IMS/Blue Shield Relations in Reference to Implementation of Part B—P.L. 89-97—Medicare.

(Referred to the Reference Committee on Legislation and Medical Service.)

In reference to the role of the Iowa Medical Society in connection with the implementation of Part B of the Medicare Law, the Board of Trustees believes that the Society is not only responsible, but obligated, to participate actively in establishing and implementing basic policies that may affect the practice of medicine.

As a result of numerous conferences and negotiations between IMS and Blue Shield officials, and subsequent meetings of the Blue Shield Board of Directors and the IMS Executive Council, Blue Shield received full endorsement and support from the IMS to be named as carrier in Iowa for Part B of the Medicare Law. This recommendation was communicated to the Department of Health, Education and Welfare early in December and, as you know, Blue Shield was officially designated as carrier on February 11, 1966.

However, before this recommendation was made, there was mutual agreement between the IMS and Blue Shield on the following provisions:

1. That the Memorandum of Understanding and Joint Statement of Intent are applicable as a guide to both the IMS and Blue Shield in determining their relationship under P.L. 89-97.

2. That the Society would participate in the negotiation, modification or renewal of the carrier contract with the Department of Health, Education and Welfare.

3. That the Society would actively participate in all physician information programs relating to the Medicare Law.

4. That the established mechanisms of state and county medical society claims review committees be utilized in adjudicating Medicare claims requiring special attention.

As announced to the general membership in an IMS NEWS BULLETIN dated March 23, 1966, Mr. Eldon Huston, assistant executive vice-president of the IMS, is serving as Medicare coordinator for Blue Shield on a temporary basis, until implementation of the Medicare program is underway.

Mr. Huston's services have been made available at the request of Blue Shield, and it was with great reluctance that the Board of Trustees authorized him to assume this additional responsibility. However, the Board recognized the necessity and value of consummating this arrangement.

Mr. Huston has been serving in his capacity as Medicare coordinator on a part-time basis since March 8, and will carry out his duties on a full-time schedule beginning May 1. He will return to the IMS at the earliest possible date, probably in August or September. I should like to emphasize that Mr. Huston is and will continue to be an employee of the IMS, with the Society being reimbursed by Blue Shield for his services.

The Board of Trustees believes that the selection of Mr. Huston as Medicare coordinator was an excellent one, and we are sure that he will serve the best interests of all concerned.

I should now like to call upon Mr. Guy, once again, to comment on Blue Shield's role as carrier. Mr. Guy will invite Mr. Huston to review the activities that are now going on in connection with the implementation of the Medicare program. These reports are included as Exhibit (e) and Exhibit (f) of the Supplemental Report of the Board of Trustees—Part D.

William A. Guy
Acting Executive Director
Iowa Medical Service

I believe it is rather evident by now that there is a fair amount of activity going on at your Blue Shield Plan office, but perhaps the activity that could potentially have the most far reaching and lasting effects, is in the area of Medicare.

As we "gear-up" for this program, we must devote maximum effort, using every ounce of energy and knowledge at our disposal. Certainly we do not take the responsibility lightly, for we realize our very existence, to a great extent, depends on the outcome of the negotiations and the job that is ahead of us in this area.

In the light of this responsibility and obligation, it was most gratifying when approval was obtained from your Iowa Medical Society Board of Trustees to have Eldon Huston step aboard this train as the engineer. Eldon will need your help and cooperation—your advice and your labor in the next few months ahead, because in the short time remaining before July 1, a program of administration must be developed that will have its effects for some years to come.

We, in Blue Shield, are extremely pleased to have Eldon working with us; and if you know him as we have gotten to know him, I am sure it is a source of comfort to you also. Eldon has been asked to re-

port to you today on our activities thus far in this rather great endeavor.

Eldon Huston
Medicare Coordinator

The implementation of Medicare Part B in Iowa has moved more slowly than hoped, primarily due to the lack of information from the Social Security Administration. Early in March, Blue Shield, as carrier, in cooperation with the Iowa Medical Society, formulated seven working committees to guide Blue Shield in carrying out its functions under the Medicare Law. These seven committees are listed below, and in addition a brief description of the responsibilities assigned to each committee:

MEDICARE PART B COMMITTEES

1. Medicare Contract Negotiations. *Committee Members:* Dr. C. P. Hawkins, Chairman; Dr. R. C. Larimer; Dr. C. W. Seibert; Dr. S. P. Leinbach; Mr. P. C. Cless; Mr. Robert Throckmorton. *Staff:* Mr. R. E. Keller. *Consultants:* Bill Guy; Don Taylor.

Function: Review all aspects of the contract proposed by Social Security Administration to include such things as necessary records, reports, reimbursement for cost of administration, review procedures, and actual negotiations with representatives of Social Security Administration.

2. Communication and Education. *Committee Members:* Dr. C. V. Edwards, Sr., Chairman; Dr. C. N. Hyatt; Dr. Erling Larson, Jr.; Dr. M. E. Alberts. *Staff:* Wilbur Quinn. *Consultant:* Tina Preftakes.

Function: Determine the best methods of providing personal and written Medicare information to physicians, physicians' employees, other groups of providers of services, and the general public. This could include personal calls at physicians' offices, offices of providers of other services, and area meetings.

3. Payments to Physicians and Providers of Services. *Committee Members:* Dr. R. H. Kuhl, Chairman; Mr. P. G. Norris, Jr.; Dr. K. E. Lister; Dr. J. H. Sunderbruch; Dr. Otis Wolfe. *Staff:* Harold Linden. *Consultants:* Mr. Carl Tiffany; Mr. Don Neumann.

Function: Work out agreement on the level of charges which would be reasonable and acceptable to members of the medical profession to include county and/or state review claims committees. Work out possible approaches to determining reasonable costs and/or charges for other services provided under the law.

4. Hospital-based Specialists' Services. *Committee Members:* Dr. Jack M. Layton, Chairman; Mr. P. H. Keiser; Dr. N. W. Irving, Jr.; Dr. C. E. Radcliffe; Mr. Harris Feldick. *Staff:* Russell Oldaker. *Consultant:* Mr. Robert Throckmorton.

Function: Study relationship between the two Blue Cross Plans and Blue Shield in providing benefits for services rendered by hospital-based specialists.

5. Utilization Review. *Committee Members:* Dr. E. E. Linder, Chairman; Dr. C. L. Kelly, Jr.; Dr. Elmer Smith; Dr. L. J. O'Brien. *Staff:* Dr. G. J. Kimball; Darrell Paul.

Function: Application of safeguards against improper utilization of covered services and assist, where necessary, in establishing review groups outside of hospitals. Relationships with Iowa Medical Society in area of utilization committees. Cost accounting to include auditing techniques to assure that costs incurred for home health services, ambulance, and prosthetic devices are reasonable.

6. Internal Procedures. *Committee Members:* Bill Recknor, Chairman; Bob Keller; Dr. Kimball; Harold Linden; Darrell Paul; Russell Oldaker; Wilbur Quinn; Don Smith; Bob DeHoet.

Function: Coordination of internal operating procedures for the processing of claims. Fair hearing procedures, systems design, statistical requirements, staff acquisition and training.

7. General Overall Coordination. *Committee Members:* Dr. G. H. Scanlon, Chairman; Dr. A. W. Devine; Mr. P. C. Irwin; Dr. S. P. Leinbach; Dr. C. W. Seibert. *Staff:* Bill Guy. *Consultants:* Don Taylor; Mr. Robert Throckmorton.

Function: Coordination of all committee functions.

Various meetings have been held on both a national and regional basis with officials of SSA, the AMA and the National Association of Blue Shield Plans. Unfortunately, little definitive information has been imparted by SSA, and this has precluded the seven committees from functioning as rapidly as was contemplated.

We have found that Federal officials are anxious to read into the Medicare Law certain factors which the "carriers" find objectionable. For example, P.L. 89-97 is explicit in charging the "carrier" with the responsibility of determining reasonable charges based principally on three criteria set forth in the Law:

1. . . . such charge will be reasonable . . .

2. . . . not higher than the charge applicable, for comparable service and under comparable circumstances, to the policy-holders and subscribers of the carrier.

3. . . . there shall be taken into consideration the customary charges for similar services generally made by the physician . . . as well as the prevailing charges in the locality for similar services.

The above, Blue Shield as "carrier" proposes to accomplish in close cooperation with the state and county medical societies.

The SSA has issued proposed "Guidelines for Determination of Reasonable Charges" which it suggests be used by the carrier in determining which charges are reasonable. Strong objections to the guidelines have been registered by all parties concerned. The final outcome of this specific situation and other points of disagreement will be negotiated when representatives journey to Baltimore to negotiate a final contract with the Secretary of Health, Education and Welfare. Of course, Blue Shield realizes and is committed to the idea that some things are simply not negotiable. The Board of Directors has strongly indicated that if Blue Shield is unable to serve as "carrier" under this Law in a manner serving the best interests of the profession and the public, then Blue Shield will not enter into any contract with HEW.

Information from the SSA is now being received at an accelerated rate. We anticipate that within the next few weeks final regulations will be issued which will permit the committees named above to formulate final plans for discharging the carrier's role under Medicare in Iowa on July 1, 1966. Naturally, everything is subject to final contract negotiations between Iowa Medical Service and the Secretary of HEW.

In order adequately to inform physicians and their employees regarding Blue Shield's role as Iowa Medicare carrier—Part B, a series of seventeen area meetings have been scheduled in close cooperation with

the Iowa Medical Society and constituent county medical societies. A complete listing of the meeting dates and sites follows:

1. *Tuesday, May 24—6:30 p.m.:* Berning Cafe, Creston. Counties: Adair, Adams, Madison, Union-Taylor, Clarke, Decatur and Ringgold.
2. *Wednesday, May 25—6:30 p.m.:* Hotel Tallcorn, Marshalltown. Counties: Marshall, Tama, Jasper, and Poweshiek.
3. *Thursday, May 26—6:30 p.m.:* Elks Country Club, Lake Manawa, south of Council Bluffs on Highway 192. Counties: Harrison, Shelby, Audubon, Pottawattamie, Cass, Mills, Montgomery, Fremont and Page.
4. *Tuesday, May 31—6:30 p.m.:* Ken-a-Bob Buffet, Flint Drive, Storm Lake. Counties: Buena Vista, Carroll, Cherokee, Ida and Sac.
5. *Wednesday, June 1—6:30 p.m.:* Stubbs Ranch Kitchen, Highway 71, south of Spencer. Counties: Clay, Emmett, Dickinson, Lyon, Osceola, O'Brien, Palo Alto and Pocahontas.
6. *Thursday, June 2—6:30 p.m.:* Sioux City Country Club, 40th & Jackson, Sioux City. Counties: Woodbury, Sioux, Crawford, Monona and Plymouth.
7. *Tuesday, June 7—6:30 p.m.:* Roosevelt Hotel, Cedar Rapids. Counties: Linn, Jones, Cedar and Benton.
8. *Wednesday, June 8—6:30 p.m.:* University Athletic Club, RFD No. 1, Iowa City. Counties: Johnson, Washington and Iowa.
9. *Thursday, June 9—6:30 p.m.:* The Chateau, 3750 Central Avenue, Dubuque. Counties: Dubuque, Delaware and Jackson.
10. *Tuesday, June 14—6:30 p.m.:* Hotel Savery, Des Moines. Counties: Dallas-Guthrie, Boone, Story and Polk (includes Warren).
11. *Wednesday, June 15—6:30 p.m.:* Treloars, two miles north of Fort Dodge on Highway 413. Counties: Webster, Calhoun, Hamilton, Greene, Kossuth and Humboldt.
12. *Thursday, June 16—6:30 p.m.:* Ottumwa Country Club, East Golf Street, Ottumwa. Counties: Wapello, Marion, Mahaska, Keokuk, Lucas, Monroe, Wayne, Appanoose and Davis.
13. *Tuesday, June 21—6:30 p.m.:* Elks Club, 407 East Park, Waterloo. Counties: Hardin, Grundy, Black Hawk, Butler, Bremer and Buchanan.
14. *Wednesday, June 22—6:30 p.m.:* Winneshiek Hotel, Decorah. Counties: Winneshiek, Howard, Allamakee, Chickasaw, Fayette and Clayton.
15. *Thursday, June 23—6:30 p.m.:* Hotel Hanford, Mason City. Counties: Cerro Gordo, Wright, Worth, Franklin, Mitchell, Floyd and Hancock-Winnebago.
16. *Tuesday, June 28—6:30 p.m.:* YM-YWCA, 606 West Second Street, Davenport. Counties: Scott, Clinton and Muscatine.
17. *Thursday, June 30—6:30 p.m.:* Hotel Burlington, Burlington. Counties: Des Moines, Jefferson, Henry, Lee, Louisa and Van Buren.

Finally, it is anticipated that a series of Medical Bulletins will be mailed to all Iowa physicians during the next few weeks as information of specific interest is made available.

On behalf of the AMA Educational and Research Foundation, the chairman of the Board of Trustees, Dr. C. W. Seibert, presented a check in the amount of $13,872.69 to Dr. Robert C. Hardin, dean of the U. of I. College of Medicine. Dr. Hardin responded briefly.

Dr. George Scanlon, president of the Iowa Medical Foundation, reported on the student loan portion of the organization, as follows:

Informational Report on the Iowa Medical Foundation

George H. Scanlon, M.D.

It is my privilege and pleasure to report to you on the activities of the Iowa Medical Foundation. The Foundation has continued its growth and has broadened its area of service during the twelve months since the House of Delegates last convened. At the very outset, let me reiterate my belief that the Iowa Medical Foundation in the years ahead will go forward in direct relation to the support it receives from the doctors of the state. I hope that each of you will personally do all within your power to encourage your colleagues to become familiar with and offer support to the Iowa Medical Foundation.

As the work of the Foundation becomes increasingly familiar to Society members and as its broadened program gains acceptance, the need for restating purposes and objectives will, of course, diminish. Permit me, however, at least for one more year, to recite one or two facts about the Iowa Medical Foundation which are quite familiar to many of you, but which still may be new to some. The Foundation was created in 1963 as a non-profit corporation established to engage in, assist, further, promote and contribute to the support of such charitable, educational and scientific activities as are, in general, either directly or indirectly, related to health or medicine. The Foundation grew out of the Iowa Medical Society Educational Loan Fund, and it continues to use the bulk of its resources to assist deserving medical students by granting them educational loans.

The Foundation takes its direction from a nine-member Board of Directors. This Board will hold its Annual Meeting tomorrow to assess the Foundation's 1965-66 activity and to contemplate expansions in the program for the ensuing year. It may be of interest to you to point out that the Directors of Foundation agreed at their Annual Meeting a year ago to request physical space in the form of a separate and distinct office in the new Headquarters Building of the Iowa Medical Society. I can report to you that this has been consummated, and the Foundation is operating from an office in the IMS Building.

It will become apparent to you during the next several days that the Iowa Medical Foundation is a participant in this year's IMS Annual Meeting to a greater degree than it has been in any previous Annual Meeting during the Foundation's existence. The Foundation is sponsor of the panel discussion on Monday entitled, "A Look at Medical Education." This panel features three distinguished speakers and opens the two-day program of General Sessions. The Foundation's Board of Directors, acting on a request from the House of Delegates, has asked that this program of the General Sessions be designated as the Baldridge-Beye Memorial Panel. It is anticipated this type of educational program will be an annual activity of the Foundation. I might hesitate to tell the young doctors who were not around here some years ago that Dr. Beye and Dr. Baldridge were very excellent teachers and were both killed, unfortunately, in an automobile accident while going around giving lectures and helping the doctors around the state.

Also at the 1966 Annual Meeting, among the exhibits, you will find a question and answer game

which we invite you to play as a means of testing your knowledge of the Iowa Medical Foundation. This display has been developed obviously to acquaint physician visitors to the Annual Meeting with the Foundation. The Foundation's informational booklet will be available at the exhibit for interested persons.

This past year has seen the Foundation involve itself in two different "Fair" projects. For the second year in a row the Foundation has been permitted to share with the Des Moines Register & Tribune Company, Drake University and the Iowa Medical Society in sponsorship of the 1966 Hawkeye Science Fair. The 1966 Fair, which attracted better than 600 participants, was held earlier this month at the Veteran's Auditorium in Des Moines.

The Foundation joined with the Iowa Medical Society last August to sponsor an educational exhibit at the 1965 Iowa State Fair on the subject of tetanus. The Foundation's Board will consider tomorrow possible participation in the expanded health education project at the 1966 Iowa State Fair. This project is being developed by the Iowa Interprofessional Association. It will bring together for display, in a "Hall of Health" setting, educational exhibits developed by the members of the IIA, the State Department of Health and several other organizations. It is hoped that the Foundation may be able to take part in this activity.

As you may recall, a letter was distributed near the end of 1965 to all members of the Iowa Medical Society describing in brief some of the Foundation's activities. This letter also invited physicians to consider a year-end contribution to the Foundation. I am pleased to report that a number of doctors responded to this letter with gifts to the Foundation.

This leads me to report further that actual support and other indications of support have come to the attention of the Society during the past year, and, more specifically, since the beginning of the calendar year. There is some risk in calling attention to any one specific gift to the Foundation, for fear of omitting an equally significant one. However, it is perhaps appropriate to mention that in recent weeks the Scott County Medical Society has given to the Foundation a $5,000 sum which has previously been on loan. Scott County has also turned over to the Foundation for collection nearly $4,000 outstanding in a nurse loan program which the county society has elected to suspend. Another significant gift of $1,000 was made to the Foundation earlier this year by the Lee County Medical Society.

While the Foundation has contemplated since its inception the rendering of assistance to needy physicians, a fact which becomes evident from a reading of the stated purposes, the Board will consider ways of formalizing such a program when it meets tomorrow.

As part of the IMS "Year of Dedication" activities, the Foundation contemplates the sponsorship of a series of monthly lectures by Iowa physicians on medical subjects of interest to the lay public. These evening lectures will be presented at the new IMS Headquarters Building during the latter part of the fall and early winter.

This then will give you some insight into the activity of the Iowa Medical Foundation. I should like now to add to these comments for your information the following financial report.

IOWA MEDICAL FOUNDATION
BALANCE SHEET—DECEMBER 31, 1965

ASSETS:		
Central National Bank & Trust Company	$ 26,232.14	
Iowa State Bank & Trust Company	16,260.74	
Notes Receivable from Medical Students	144,245.51	
100 Shares of American Scientific Corp.	60.00	
		$186,798.39
LIABILITIES AND NET WORTH:		
Notes Payable to Physicians		$ 48,150.00
Net Worth:		
Balance 1-1-65	$139,809.19	
Less 1965 Loss	1,160.80	$138,648.39
Total Liabilities and Net Worth		$186,798.39

IOWA MEDICAL FOUNDATION
Income and Expense Statement—December 31, 1965

INCOME:		
Interest on Loans	$3,703.62	
Contributions and Memorials	1,415.40	
		$5,119.02
EXPENSES:		
Interest Paid to Physicians	$3,190.20	
Printing Checks	20.36	
Administrative Expense	300.00	
Legal Services	133.00	
Hawkeye Science Fair	2,500.00	
Register & Tribune	58.42	
Tax Return	30.00	
Printing Expense	47.84	
		6,279.82
Net Loss for 1965		$1,160.80

As I mentioned earlier, the granting of loans to deserving medical students constitutes the largest portion of the Foundation's effort. I should like, as in preceding years, to conclude this report by relating to you that which has been accomplished by this loan program.

Total loans entered into since inception of the program	$276,278.42
Loans repaid	$134,307.65
Loans outstanding as of April 15, 1966	$141,970.77
Number of students who have participated	189
Number of loans paid in full	88
Number of loans outstanding	101

Finally, as has become the custom, may I introduce two medical students from the University of Iowa College of Medicine: Paul Gjerstad, a senior; and Jerry Jochims, a junior. Mr. Gjerstad is one of the recipients of an Iowa Medical Foundation student loan and we have asked him to comment briefly on how it has been of value to him.

Mr. Gjerstad addressed the House briefly.

Supplemental Reports of Standing Committees

NOMINATING COMMITTEE

The Nominating Committee of the Iowa Medical Society met on Sunday, March 13 and agreed upon the following slate to be presented to the House of Delegates today.

President-elect	R. F. Birge, M.D., Des Moines
Vice President	K. K. Hazlet, M.D., Dubuque
Secretary—3 year term	V. L. Schlaser, M.D., Des Moines
Treasurer—3 year term	T. A. Burcham, Jr., M.D., Des Moines
Speaker, House of Delegates	P. M. Kersten, M.D., Fort Dodge

Vice Speaker, House of Delegates	J. L. Powers, M.D., Estherville
Trustee—3 year term	J. H. Sunderbruch, M.D., Davenport
Delegates to AMA— Two 2-year terms	H. J. Smith, M.D., Des Moines L. W. Swanson, M.D., Mason City
Councilor, Third District—3 year term	J. M. Rhodes, M.D., Pocahontas
Councilor, Fifth District—3 year term	R. L. Wicks, M.D., Boone
Councilor, Tenth District—3 year term	E. E. Gamet, M.D., Lamoni
Blue Shield Liaison Delegates to IMS (Two to be elected)	C. V. Edwards, Sr., M.D., Council Bluffs C. N. Hyatt, M.D., Corydon T. E. Kiernan, M.D., Sioux Center R. C. Larimer, M.D., Sioux City

Additional nominations may be accepted from the floor, after which the speaker of the House of Delegates will declare nominations closed.

The Articles of Incorporation and By-laws require that for candidates to be unopposed for nomination they must be unanimously approved by the Nominating Committee. Although it is recognized that it is desirable to have two candidates as a minimum for each of the proposed offices, the Nominating Committee is submitting but one candidate for each office since these were the only names formally proposed to the Nominating Committee and were unanimously approved by the Nominating Committee.

It will be noted that there are four candidates for the two offices of Blue Shield Liaison Delegate to the Iowa Medical Society. Under the Articles of Incorporation and By-laws of the Iowa Medical Society, the Liaison Committee shall submit to the Nominating Committee the names of four or more candidates for the two positions of Liaison Delegate. Therefore, under the IMS By-laws, it is mandatory that four or more names be submitted to the Nominating Committee for these offices. These names are merely received by the Nominating Committee and submitted as a part of its report to the House of Delegates.

Respectfully submitted,
R. B. STICKLER, M.D., *Chairman*
V. H. CARSTENSEN, M.D.
B. H. OSTEN, M.D.
C. J. SMITH, M.D.
P. M. CMEYLA, M.D.
C. D. ELLYSON, M.D.
J. E. TYRRELL, M.D.
J. F. BISHOP, M.D.
F. O. W. VOIGT, M.D.
R. W. BOULDEN, M.D.
M. E. OLSEN, M.D.

The report of the Nominating Committee was adopted as presented. Nominations from the floor were requested, but none were offered. Nominations were then closed, and nominating and seconding speeches were presented.

COMMITTEE ON LEGISLATION

Dr. J. H. Kelley, the chairman, said that the Committee on Legislation had no supplemental report, but he requested the privilege of the floor for Dr. Otis D. Wolfe, chairman of the Iowa Medical Political Action Committee. Dr. Wolfe gave a short address on the necessity of political action on the part of physicians. His remarks were accompanied by a slide presentation.

NECROLOGY COMMITTEE

(The Speaker asked the members of the House of Delegates to rise during the reading of the names of members of the IMS who had died during 1965. The list appears on page 709 of this issue of the JOURNAL.)

MEDICAL-HOSPITAL STATISTICAL SUBCOMMITTEE

(Referred to the Reference Committee on Legislation and Medical Service.)

The House of Delegates was informed in the Handbook Report of the Medical/Hospital Statistical Subcommittee about the hospital statistical study now in progress. This six-month pilot project was started in November 1965. It is a joint undertaking of the Iowa Medical Society and the Iowa Hospital Association.

It was indicated in the Subcommittee's Handbook Report that preliminary findings from the study, if available, would be presented to the House of Delegates in the form of a Supplemental Report. To this end, the Subcommittee is submitting the attached analysis which also was presented to the Delegates of the Iowa Hospital Association earlier this month. This analysis will afford an indication of the type of data which may be evolved from the study. Only a cursory breakdown of the raw data, these charts reflect information gathered on patients discharged from 25 of the 27 participating hospitals during the months of November and December. For purposes of demonstrating the sort of information obtainable, 13 diagnoses or diseases were selected and analyzed as to number of admissions, number of days, total charges, average length of

HOSPITAL-MEDICAL STATISTICAL PILOT STUDY
Accumulations of Selected Categories for 25 Hospitals, November and December, 1965
ADMISSIONS BY DIAGNOSIS

Diagnosis and Disease	*No. of Adm.*	*No. of Days*	*Total Charge*	*Avg. Days' Stay*	*Avg. Chg. Per Day*	*Avg. Chg. Per Adm.*	*Per Cent of Total Adm.*	*Per Cent of Total Days*	*Per Cent of Total Charge*
Heart: Arterio and degen.	273	3,449	$ 100,554	12.63	$29.15	$368.33	3.1649	5.3747	4.9623
Acute u. respir. infect.	204	1,062	31,120	5.21	29.30	152.55	2.3649	1.6550	1.5358
Pneumonia	376	2,926	86,151	7.78	29.44	229.13	4.3589	4.5597	4.2515
Bronchitis	230	1,396	42,772	6.07	30.64	185.97	2.6664	2.1754	2.1108
Other respir. diseases	393	1,244	54,100	3.17	43.49	137.66	4.5560	1.9386	2.6698
Disease: Stomach and duoden.	316	2,229	78,631	7.05	35.28	248.83	3.6633	3.4735	3.8804
Appendicitis	136	832	33,137	6.12	39.83	243.65	1.5766	1.2965	1.6353
Abdominal hernia	172	1,220	45,500	7.09	37.30	264.53	1.9940	1.9012	2.2454
Female: Uterus and genital	262	1,509	62,512	5.76	41.43	238.60	3.0373	2.3515	3.0850
Delivery: No complications	875	4,020	135,616	4.59	33.74	154.99	10.1438	6.2645	6.6926
Delivery: Specific compli.	30	255	10,108	8.50	39.64	336.93	.3478	.3974	.4988
Osteo. and other bone and joint	173	1,841	62,191	10.64	33.78	359.49	2.0056	2.8689	3.0691
Fracture: Lower limb	154	3,397	95,778	22.06	28.19	621.94	1.7853	5.2937	4.7266
All other diseases	5,032	38,791	1,188,183	7.71	30.63	236.13	58.3352	60.4494	58.6366
Total or Average	8,626	64,171	$2,026,353	7.44	$31.58	$234.91	100.0000	100.0000	100.0000

stay, average charge per day, etc. The chart in the middle of the page evaluates the same patients on the basis of age. And the evaluation at the bottom of the page makes a more detailed comparison of those patients over 65 years of age and those under 65 years of age insofar as charges are concerned.

The attached should be recognized as only a sampling of the information which may be derived from the raw data supplied by the participating hospitals. As previously reported, the project and tabulations will be reviewed and analyzed by the Joint Committee of the IMS and the IHA in the near future. Determination will be made at that time by the Joint Committee as to the type of statistical data which might be developed into a preliminary report for presentation to the IMS Executive Council. Recommendations will also be considered as to whether or not the project should be carried beyond the six-month pilot period which concludes in April.

It is hoped that the House of Delegates may see fit to encourage the Society's continued participation in this statistical study of hospital utilization.

G. G. YOUNG, M.D., *Chairman*

SUBCOMMITTEE ON SAFE TRANSPORTATION

(Referred to the Reference Committee on Miscellaneous Business.)

You will recall that at the 1965 House of Delegates meeting, the Subcommittee on Safe Transportation recommended the creation of a Medical Advisory Board to the State Department of Public Safety to assist the Department in interpreting medical statements and in making appropriate recommendations concerning applicants for drivers licenses who have mental or physical impairments which are questionable, insofar as the Department of Public Safety is concerned.

It was pointed out that the AMA recommends that a medical examination for "driver limitation" be conducted at least under the following conditions: (1) when a licensed applicant displays an obviously impaired physical function; (2) when a driver has been involved in multiple accidents within a short calendar period; (3) when a driver must be placed in the "assigned risk" pool for insurance underwriters because of refusal by various commercial carriers to assume the risk; and (4) when a driver voluntarily suggests that he "blacked out" or that medical problems contributed to an accident.

It was also reported to the House that the following recommendation was made at an AMA National Conference on Medical Aspects of Driver Safety and Driver Licensing: "Medical Advisory Committees must be established in each state to provide consultation to motor vehicle administrators about medical fitness of specific drivers, and to work with administrators and others concerned to develop a state plan of action."

Subsequently, the Subcommittee on Safe Transportation was authorized by the House to develop a detailed program regarding the function of a medical advisory board, for approval by the Executive Council.

As reported to you in the 1966 HOUSE OF DELEGATES HANDBOOK, we were unable to implement this proposed program during the past year because of higher priority projects of the State Department of Public Safety. However, the Department is anxious to initiate this program at the earliest possible date, as evidenced by the following extract from a letter submitted to the Subcommittee by officials of the Department of Public Safety and the Iowa Highway Safety Patrol:

"There are instances in which the Drivers License Division of the Iowa Highway Safety Patrol is required to evaluate the physical or mental competency of an applicant for a license to drive. There are occasions when we require medical reports on persons, already licensed, who have been denied the continuation of this privilege due to mental or physical deficiencies. A new medical report form is being developed which is more comprehensive than the one which we have been using. The personnel of the Department are not in a position to make a medical evaluation of a person who evidences a physical or

ADMISSION BY AGE

Age	*No. of Adm.*	*No. of Days*	*Total Charge*	*Per Cent of Total Adm.*	*Per Cent of Total Days*	*Per Cent of Total Charge*	*Avg. Days' Stay*	*Avg Chg. Per Day*	*Avg. Chg. Per Adm.*
-1	873	4,339	$ 49,315	10.1206	6.7616	2.4337	4.97	$11.37	$56.49
1-4	357	1,480	47,417	4.1387	2.3063	2.3400	4.15	32.04	132.82
5-13	617	2,291	81,917	7.1528	3.5701	4.0426	3.71	35.76	132.77
14-24	1,259	6,007	211,863	14.5953	9.3609	10.4554	4.77	35.27	168.28
25-34	980	5,436	192,289	11.3610	8.4711	9.4894	5.55	35.37	196.21
35-44	877	5,558	201,077	10.1669	8.6612	9.9231	6.34	36.18	229.28
45-54	925	7,066	253,270	10.7234	11.0112	12.4988	7.64	35.84	273.81
55-64	888	8,051	277,557	10.2945	12.5462	13.6974	9.07	34.47	312.56
65-74	924	9,654	321,978	10.7118	15.0442	15.8895	10.45	33.35	348.46
75+	926	14,289	389,670	10.7350	22.2672	19.2301	15.43	27.27	420.81
Total or Average	8,626	$64,171	$2,026,353	100.0000	100.0000	100.0000	7.44	$31.58	$234.91

CHARGES BY AGE GROUPS

	Patients Under 65				*Patients 65 and Over*				*All Patients*			
	TOTAL CHARGES	CHG. PER DAY	CHG. PER ADM.	PER CENT OF TOTAL CHARGES	TOTAL CHARGES	CHG. PER DAY	CHG. PER ADM.	PER CENT OF TOTAL CHARGES	TOTAL CHARGES	CHG. PER DAY	CHG. PER ADM.	PER CENT OF TOTAL CHARGES
Room	$ 665,010	$16.52	$ 98.14	50.58	$416,974	$17.42	$225.39	58.59	$1,081,984	$16.86	$125.43	53.39
Laboratory	126,255	3.14	18.63	9.60	56,499	2.36	30.54	7.93	182,754	2.85	21.19	9.01
X-ray	96,457	2.40	14.24	7.33	40,962	1.71	22.14	5.75	137,419	2.14	15.93	6.78
Other	427,181	10.62	63.04	32.49	199,505	8.33	107.84	28.03	626,686	9.77	72.65	30.92
Totals*	$1,314,705	$32.68	$194.02	100.00	$711,648	$29.72	$384.67	100.00	$2,026,353	$31.58	$234.91	100.00

* Totals may vary slightly due to reporting.

mental problem. We earnestly solicit the assistance and cooperation of the Iowa Medical Society membership in making an evaluation when a report of physical examination has been received which is unfavorable and the applicant contests the departmental determination to refuse the license."

As a result of several conferences with representatives from the Department of Public Safety and the Iowa Highway Safety Patrol, and a recent meeting between representatives from these agencies and the Subcommittee on Safe Transportation, we are pleased to submit the following specific recommendations regarding the creation and function of a Medical Advisory Board to the Department of Public Safety for consideration by this House of Delegates and, if approved, for immediate implementation:

1. A panel of physicians should be appointed by the president of the Iowa Medical Society, to be designated as the Medical Advisory Board to the Department of Public Safety. Neither the Subcommittee on Safe Transportation nor the Department of Public Safety believes it necessary or desirable for the names of the members of the Board to be made public. In this connection, the Department does not expect or wish to be provided the names of the physicians serving on the Board.

2. At the present time, the Department of Public Safety has authority to request medical statements from drivers who have obvious need of a medical examination. If the Department feels that assistance is required in evaluating an applicant's medical report, it will be referred to the Medical Advisory Board, in the following manner:

a. The medical report will be duplicated by the Department in sufficient quantity so that each member of the Advisory Board will have a copy for independent study, evaluation and recommendation.

b. The copies of the medical report will be forwarded by the Department to the IMS headquarters office, and IMS staff will then transmit a copy to each member of the Advisory Board. The report will be identified by number only.

c. The Board members will have adequate time—perhaps 10 days or two weeks—to study the report, and to offer their recommendations. Board members will be free to consult with their colleagues regarding the information contained in the report, if necessary. It is conceivable that members of the Board could give a firm positive or negative recommendation; decline to comment because of a lack of information; or request additional and supporting medical data before a final opinion is expressed.

3. After the members of the Board have had opportunity to evaluate the medical report and to make whatever recommendations or comments they wish, the reports will be returned to the IMS headquarters office, and the complete file will then be forwarded to the Department of Public Safety.

4. The Medical Board will serve in an advisory capacity only, and the final determination regarding the granting of a driver's license will remain the responsibility of the Department of Public Safety.

It is not anticipated that this load will be heavy, because if the original medical report provided by the applicant's physician is unfavorable, the Department will refuse to issue a license, and the file will not be referred to the Advisory Board. However, in this instance, if the applicant insists, members of the Medical Advisory Board will be requested to make a recommendation.

For the information of the House of Delegates, suggested forms to be completed by the applicant and the examining physician are attached as a part of this supplemental report. These forms were developed by the Committee on Safe Transportation, in consultation with representatives from the Department of Public Safety and Iowa Highway Safety Patrol, and are based on similar forms prepared by the State of North Carolina, the Federal Aeronautics Authority, and information contained in an article published in the NEW YORK STATE MEDICAL JOURNAL.

You will note that at the end of the "Summary of Patient's Medical History and Physical Examination" form, space is provided for individual members of the Medical Advisory Board to make appropriate recommendations.

The members of the Subcommittee on Safe Transportation are anxious to cooperate with the Department of Public Safety and the Iowa Highway Safety Patrol in this endeavor, and we strongly recommend that the establishment of a Medical Advisory Board, as outlined, be approved.

A. H. DOWNING, M.D., *Chairman*

IOWA DEPARTMENT OF PUBLIC SAFETY

Driver License Division

QUESTIONNAIRE FOR APPLICANT FOR DRIVER'S LICENSE

Name..... Age.... Date of Birth..... Sex....
Address..... Occupation..... MSWD....
Your Physician..... Address.....
I verify that all of the following statements are true to the best of my knowledge.

....
Date Signature of Applicant

Identification Number .....

INSTRUCTIONS

Place a cross (+) or check (√) in the "Yes" or "No" column in answer to the questions. All questions must be answered. For each "Yes" answer, describe condition in item #12 (Remarks).

	Yes	No
1. Have you ever been rejected by any life insurance company or by any branch of the military service? If yes, why?	....	....
2. Did you ever receive a medical discharge from the military service? If so, for what?	....	....
3. Have you ever been a patient in any public or private institution for nervous disease?	....	....
4. Have you ever been treated for, do you now have, or have you ever had any of the following:		
a. Nervous breakdown, mental or nervous disease or disorder	....	....
b. Poor memory	....	....
c. Heart disease	....	....
d. Diabetes	....	....
Do you take insulin?	....	....
e. High or low blood pressure	....	....
f. Dizziness	....	....
g. Fainting spells, convulsions (fits) or epilepsy	....	....
h. Stroke or brain injury	....	....
i. Attempted suicide	....	....
j. Any drug or narcotic habit	....	....
k. Motion sickness requiring drugs	....	....
l. Severe hay fever or asthma	....	....
m. Frequent or severe headaches	....	....
n. Unconsciousness for any reason	....	....
5. Are you taking any medicine regularly?	....	....
If so, for what reason?		
6. Have you ever had any disease, injury or operation to either eye?	....	....
Do you have any trouble with your eyes?	....	....
a. Blurred vision	....	....
b. See double	....	....
c. Do you wear glasses?	....	....
For distance?	....	....
For reading?	....	....
7. Do you have any amputation or physical disability?	....	....
8. How much alcoholic beverage do you drink?		
9. Have you been hospitalized in the last 5 years?	....	....
If so, where and for what?		
10. What physicians have treated you in the past 5 years?		
11. List places of employment in last 5 years and, if discharged, the reasons for discharge?		
.....		
12. Additional Remarks		
.....		

IOWA DEPARTMENT OF PUBLIC SAFETY
Driver License Division

SUMMARY OF PATIENT'S MEDICAL HISTORY AND PHYSICAL EXAMINATION
(This report must be completed by a licensed physician, practicing medicine in the State of Iowa unless your family doctor resides out-of-state.)

Name ..... Age .... Date of Birth ..... Sex....
Address ..... Occupation ..... MSWD....
Applicant Requested to Submit Medical Report Due to .....
I hereby authorize Doctor ..... to give me any examination he deems necessary for the purpose of determining my fitness to operate a motor vehicle. I also authorize any other physicians who may have attended me, or any hospital or clinic in which I may have been treated, to give the Department of Public Safety any information they may request concerning my condition.

I understand that this authorization includes permission for the Department of Public Safety to have this information reviewed by a consulting board of unidentified physicians for the purpose of giving the Department a medical opinion on my case, and that this information will be identified by number only to the consulting physicians.

.....
Signature of applicant

Identification Number .....
Diabetes: Age at onset .... Does patient take insulin? .... How much? .... What kind? .... Has patient ever been in a coma? .... How many times? .... Date of last coma? .... Has the patient ever had insulin shock? .... How many times? .... Date of last shock .... Is there any warning of impending coma or impending shock? .... Degree of control .....

Orthopedic: Are there any stiff or frail joints? .... If yes, where? .... Are there any spastic or paralyzed muscles? .... If yes, where? .... Has there been an amputation? .... If yes, what portion of the anatomy? .... Do any of the above interfere with the patient's driving? .... Does patient use or need any orthopedic appliances or supports? .....

Cardiac: B.P. ..... Edema .....
Dyspnea and/or angina: At rest .....
Slight exertion .....
Moderate .....
Is there any syncope? .. If yes, frequency and severity .....
Does the patient take Nitroglycerin or Blood Pressure medicine? .....
If so, what amount? .....
Functional capacity AHA:
Class 1—No limitation physical activity .....
Class 2—Slight limitation physical activity .....
Class 3—Marked limitation physical activity .....
Class 4—Complete limitation physical activity .....

Neurological and Mental: Has the patient had blackout spells? .... If yes, how often? .... Date of last one .... Has the patient had epilepsy or convulsive seizures? .... If yes, date of onset and history .....
How many and how often? ..... Does the patient take drugs regularly for them? .... What? .....
Is the patient under regular medical care? .... Has there been an electroencephalogram? .... If yes, diagnosis .... Is coordination normal? .... Is there any vertigo? .... Has patient had stroke or brain injury? .... Is there any residual disability? .....

What was highest grade in school? ..... At what age was it obtained? .... Has he ever been committed to a hospital for alcohol or drug habit? .... If so, how many times .... Length of stay .... Also, type of discharge .....
Has he ever been a patient in or committed to an institution for the insane or feebleminded or treated in a hospital for mental illness? .... When (Date)? ..... Where (Location)? .....

Intelligence: Quick .... Average .... Dull ....
Temperament: Aggressive .... Quiet .... Cooperative .... Non-cooperative ....

Visual: Visual acuity—Name type of equipment used .....
Without glasses: RE 20/..... LE 20/..... BE 20/.....
With glasses: RE 20/..... LE 20/..... BE 20/.....
Confrontation Fields .....
Can applicant differentiate vivid red from vivid green? ....
Hearing: Conversational voice—distance in feet ..... Audiometric test if indicated ..... Is hearing aid worn? .... If yes, does it give sufficient correction? ....

Laboratory: Urinalysis ..... Hemoglobin ..... Serology.....
Fasting Blood sugar, if applicable .... Other Supporting Lab data .....

Examining Physician:
How long have you treated this patient? .....
Date you last treated him .....
Does he take his medicine regularly? .....
Have you treated this patient for alcoholism? .....

Please list other significant findings which in your opinion would have any bearing on this individual's ability to drive .....
(Please attach additional sheets if narrative report is required)
Does the Examinee have any physical or mental disorders which might render him incompetent to safety operate a motor vehicle? .....

Date of Examination: .....
Date of Report: .....

.....
Name of Physician

.....
Address of physician

When the forms are completed, please mail the original copy to the Chief Examiner's Office. You may retain the duplicate copy for your record.

Iowa Department of Public Safety, State Office Building, Des Moines, Iowa

MEDICAL ADVISORY BOARD

Comments:

In my opinion, this applicant is competent to safely operate a motor vehicle. Yes .... No ....

On the basis of the information provided, I am unable to render an accurate opinion and request the following additional information:

SUBCOMMITTEE ON PUBLIC ASSISTANCE

(Referred to the Reference Committee on Legislation and Medical Service.)

The content of this supplemental report to the House of Delegates is based almost entirely on matters discussed by the Subcommittee with the State Board of Social Welfare at a meeting held April 14. This report is informational for the most part, but does contain a three-fold recommendation upon which the Subcommittee hopes the House of Delegates will act favorably.

First of all, while it is generally known, it perhaps deserves to be mentioned for the record that those services under the Medical Assistance for the Aged (MAA) program which were either curtailed or eliminated on December 1, 1965, were restored to their original basis, as of April 1, 1966, with the exception of hospitalization. Hospitalization is now available to MAA recipients to the extent of 60 days (it was previously unlimited) during the 12-month period beginning April 1, 1966. With Title XVIII of P.L. 89-97 becoming effective July 1, 1966, and having a relieving effect on MAA funds, the Board of Social Welfare anticipates the MAA program will operate in a comprehensive form until the end of the state biennium July 1, 1967.

The Title XVIII and Title XIX programs of the Social Security amendments of 1965, as they relate to the public welfare sector, are complex to a point where they defy description in a succinct manner. Be that as it may, it should be made known that the Board of Social Welfare has declared that it will purchase (or buy in) for its Old Age Assistance recipients in the voluntary Part B phase (physicians' services) of Title XVIII of Medicare. This means the Board of Social Welfare will pay the three dollar monthly requirement for each of these persons, and it will also pay the $50 annual deductible and the 20 per cent co-insurance amount.

It is important to bear in mind that with this move these OAA recipients will now receive medical care and coverage in virtually the same manner as all participants in the Medicare program. This means that physicians will be reimbursed on the basis of reasonable and customary charges, as set forth in the law and as determined by the carrier or fiscal intermediary. This represents a significant step forward in that it eliminates antiquated fee schedules in this area.

The Subcommittee believes the Board of Social Welfare exercised sound judgment in its prompt decision to purchase Part B coverage for its OAA recipients.

The Board of Social Welfare has elected to authorize Iowa Medical Service (Blue Shield) to serve as carrier for the OAA recipients of Medicare benefits, as it will for the balance of the XVIII-B program in Iowa. The Board is also encouraging its MAA population to purchase XVIII-B, and for those who do, Blue Shield will act as carrier beginning July 1, 1966.

The Board of Social Welfare has elected not to assume responsibility for its OAA population in connection with the $40 deductible required under Part A of Title XVIII. This responsibility will rest with the individual counties. Notwithstanding this fact, the counties will be relieved of much of their financial outlay in the area of medical care when the previously described circumstances become effective on July 1, 1966.

The Title XIX phase of P.L. 89-97 may be described as the welfare portion of the law. This section of the law will require all medical aspects of the categorical programs (Old Age Assistance, Aid to the Blind, Aid to the Disabled, Aid to Dependent Children) to be transferred into a single medical and remedial care program by 1970. It is this section of the law for which the Department of Social Welfare is to serve as the state agency. The Department of Health has a similar role for the Title XVIII phase.

As many know, Title XIX is a broad and extensive program to assist states in financing medical and remedial care for the needy. As mentioned, care will be provided eventually on a comprehensive basis through a single program in each state, providing equal benefits to all those eligible. Every Title XIX medical assistance program must include by July 1, 1967, in order to receive federal matching funds: 1) inpatient hospital care; 2) outpatient hospital services; 3) laboratory and X-ray services; 4) skilled nursing home services for individuals 21 or older; and 5) physicians' services, whether furnished in the office, the patients' homes, a hospital, a skilled nursing home or elsewhere.

Enabling legislation will be necessary in Iowa before a Title XIX program can be instituted. The Board of Social Welfare has been given the responsibility for developing legislative proposals to be considered by the next Iowa General Assembly. Actions of the 1967 General Assembly will determine the fate of Title XIX in Iowa.

After 1969, no federal matching funds for medical care of the needy will be available through other assistance programs. Representatives of the Department of Social Welfare called to the attention of the Subcommittee that the ratio of federal-state participation in Title XIX in Iowa will be 60.39 federal and 39.61 state. The MAA ratio is now 57 federal and 43 state. It was pointed out that a state may not reduce or cutback its total appropriations in this area as a means of saving the state money. A state must expend at least as much as it is currently, and it can spend more. The new matching formula applied to current state expenditures will, according to Welfare Department officials, result in 7.8 million additional dollars for Iowa.

In concluding this report the Subcommittee would like to have the House of Delegates consider the following recommendations:

1) That the Iowa Medical Society maintain a close scrutiny over the development of enabling legislation for Title XIX in Iowa;

2) That every effort be made to embody in the legislation provisions for an independent agency or organization to serve as fiscal intermediary or carrier in any Title XIX program which may be implemented in Iowa, and to extend this concept to all state and federal programs; and

3) That the Subcommittee on Public Assistance, because of the good rapport it has established with the Board of Social Welfare and because of its knowledge in this important area, be permitted to provide leadership in following the development of and advising on legislative proposals in Iowa relating to Title XIX of P.L. 89-97, keeping in mind at all times policy established in this area by the House of Delegates; the preceding to the extent of meeting with the Legislative Committee and other appropriate bodies of the Society for the purpose of determining the appropriate course of action to be taken.

L. J. O'BRIEN, M.D., *Chairman*

Supplemental Reports of Special Committees

DEBAKEY COMMITTEE

Herman J. Smith, M.D.

Mr. Speaker, the DeBakey Committee has no formal additional report, but now that our bitter and determined opposition to the DeBakey Bill has resulted in its passage, we should call the attention of the House to the last paragraph of our report as it appears in your HANDBOOK, page 68, which suggests that the House consider discharging the Ad Hoc Committee.

To bring the delegates up to date on what has transpired in Iowa since the enactment of Public Law 89-239, Mr. Speaker, I should like to ask the privilege of the floor again for Dean Hardin, who will speak as chairman of the Regional Advisory Committee of the Iowa Regional Medical Program.

Robert C. Hardin, M.D.

I should like to take just a few minutes to review some of the history of the so-called DeBakey report and the legislation which created the regional hospitalization program. That report came out approximately a year ago, and there was an immediate move in the Congress to appropriate a large sum of money to implement it. Thus, last June, a few medical school deans were called to the National Institutes of Health, and we separately—not together, but separately—had discussions with the people in the office of the director of the National Institutes of Health. We all expressed the same fears. The result was that we were asked to testify before the Congressional committee which was considering the legislation to implement the report, and our Medical School, among others, did testify before that committee.

Our testimony was, in effect, "For heaven's sake, slow down!" The legislation which was introduced would have required medical manpower far beyond what was available. It would have ignored the necessity for involving the physicians of the region in the planning. In essence, it said that a medical school would be given a sum of money to create a regional medical service. No medical school, as far as I know, wanted that job, for a great many reasons.

The upshot was that the legislation was changed, and the first grants which are to be given are for the purpose of making surveys and plans. The implementation thus far, consists of a set of guidelines which has been evolved by the people at the National Institutes of Health.

One peculiar thing about the heart, cancer and stroke program is that it is the only service medical program in the country which is to be administered by the National Institutes of Health. The National Institutes of Health ordinarily work with medical schools in the fields of research and research education, and have never entered into the service aspects of the medical field. Service aspects of medicine, as far as the Public Health Service is concerned, are usually under the jurisdiction of the Bureau of State Services, and are implemented through grants to the Public Health Service units in a given state—usually the state health department. One can't help speculating as to why this particular program is in the National Institutes of Health. I think the reason is that medical schools in general have said they do not wish to become involved in the larger programs with the Bureau of State Services.

The administration of these two parts of the Public Health Service are quite different. The attitudes of the people in the National Institutes of Health are much more understanding than are those of the people in the other agency about the problems of medical education and medical practice.

There is a new piece of legislation which has been introduced into the Congress, and which, to my mind, has much more far-reaching implications than the DeBakey Bill. It is a bill to require state health departments to take the lead in setting up comprehensive health plans. That bill will encompass all the things that the DeBakey Bill does, plus everything else. Implementation for that legislation will be given to the Bureau of State Services.

Our medical school, like all the rest of them in the country, is interested in three problems that have to do with heart, cancer and stroke, or for that matter, with the new legislation on comprehensive health planning. We are very much worried about the availability of manpower to carry out these plans, for it is our job to provide that manpower. We are very much worried about where the support for medical education is going to come from, if we are to produce more manpower. You have just seen the figures, on the screen, of the enormous amounts of money which have been appropriated for health programs of one kind or another. At the same time, oddly enough, the amount of money available at the federal level for support of medical education has been reduced quite markedly—in one instance by 83 per cent. These things tend to make us, in medical schools, wonder just how the health programs are going to be implemented. We feel that if this kind of planning goes on, there will have to be some planning for the support of medical education, too.

For the heart, cancer and stroke area program in Iowa, sometime ago, I talked with the IMS Board of Trustees, and then asked Dr. Long, the commissioner of health, and Dr. Ober, the president of this Society, to join me in setting up a planning committee. The legislation is peculiar in that it failed to say who should do the planning. It simply said that the planning should be done, and then left the job up for grabs. In this state, it seemed to me, perhaps the Medical School should be the one to grab it.

We had meetings, and we finally got a group together—larger than the three who composed the original group, but smaller than the one that finally developed—to do some preliminary thinking. For my own office, I also hired a young man who has a Ph.D. in health administration and a degree from the law school, for believe me, reading all the pieces of legislation requires specialized training! He has taken over the job of doing the preliminary planning for this program.

To help us, we secured the services of the T. R. W. Company, a firm of systems engineers. Its personnel are people who devised the missile systems and some of the satellite systems which are encircling the earth, and they worked for General Motors. They are now interested in entering the health field, for the obvious reason that after national defense and automotive manufacturing, health care is the third largest industry in the United States.

They have been working with us in this program. It is a toss up whether we have learned more from them than they have learned from us, for they have never worked in the health field before. Their systems approach to planning is a kind of logic which allows one, as he goes along in his planning, to have several checkpoints that help to keep him from leaving out important segments.

The guidelines for the program came out on March 25, and the first date on which one could make application for planning funds was April 15. I don't know whether anybody had an application ready for submission on that latter date; we didn't. But there are no deadlines. Contrary to most of the federal programs, in which there are three deadlines per year, there are none in this one. We can make applications for funds at any time.

After we had digested the guidelines, it was apparent that we would need a much broader planning committee, and we now have set up such a unit. On it are representatives from the Iowa Medical Society, the Iowa Osteopathic Society, the Iowa Hospital Association, the Iowa Division of the American Cancer Society, the Iowa Heart Association, the National League for Nursing, the Iowa Nurses Association, the Iowa Associations of Pharmacy and Veterinary Medicine and, in general, the interprofessional group in the state. We also need to have a representative of the general public—someone who is not in any health field. A past-president of the Iowa Parent-Teacher Association is serving in that capacity.

There is a very great deal of leg work in this project, and it has to be done by a staff, for it can't be done by a committee. We are in the process of doing it. Our timetable says that we shall make application for a planning grant on May 18. Then, if our application is approved, we can expect to have money to begin operations about July 6. We shall then spend a year in the planning phase, considering what we might do under this program in Iowa.

Iowa is in a unique position in that it is the only place in the country that already has a regional program. It has had one for 50 years! Our program is based on educational need. Patients are referred to University Hospitals so that we may have clinical material for teaching. It is also based on a very close cooperation between private enterprise—the private practice of medicine—and government, the governmental agency being the University. We have lived with this for a long time. We regard ourselves—faculty members and private practitioners—as one family, and

we don't quarrel any more than siblings in any family quarrel. It is our intent, at the Medical School, to preserve this relationship, for we believe we cannot conduct an educational program without it. The last thing we want is to be the apex of a pyramid of referring hospitals, for if we were, our beds would contain only people who had hemiplegia, who needed their aortic valves replaced or who had cancer requiring mutilating surgery. We could not train medical students to care only for those kinds of patients!

If we do develop a program of the DeBakey type, we believe that it must be similar to the one we already have in Iowa, for we have a system of medical care that works. Of course there are ways in which we can improve it. I should say that one of the things we can improve is continuing education. Perhaps we can make it easier for physicians to get a certain kind of consultation, and by this I don't mean consultation at the University Hospitals, but rather among the people in practice. Perhaps we can have a better delivery system for laboratory work; I don't know. But I think that these should be our goals, rather than any sweeping change in the structure of medical practice in the state, since any sweeping change would almost wipe out medical practice in the state, and that we could not afford!

The key to this planning phase which will begin on July 1, hopefully, is that it must be a cooperative planning effort, shared in by all of the people having major roles in health care in the state—the medical profession, the hospitals, and those of us engaged in medical education.

Just one other thing, I should like to say. I spoke this morning about the ever-increasing role of the federal government in medical education. I think that just as in medical practice, there is going to be more and more involvement of the federal government in medical education. I also feel that what the DeBakey legislation does, in essence, is to give us an opportunity—and by "us" I mean the medical school and the medical profession in Iowa—to join together in making a plan for the delivery of medical care. I also believe that it is probably the last chance we shall get. If we don't do the planning this time, it will be done for us. These are my reasons for getting into the DeBakey type of planning, and it is our hope that you will join with us, for I think we can protect our system of medical care, that we can improve it, and at the same time that we can protect and perhaps expand our system of medical education. It will take a great deal of talk, back and forth, and like a lot of other things, it will take a great deal of time. We at the University hope to furnish the necessary staff, but very many other people will also have to become involved, and we ask your cooperation. Thank you.

COMMITTEE ON RURAL HEALTH

(Referred to the Reference Committee on Legislation and Medical Service.)

The Rural Health Committee is endeavoring to cooperate with the U. of I. College of Medicine in a campaign designed to alert physicians regarding the dangers of organophosphate insecticide poisoning, and the technics for diagnosing and treating cases of it.

At a meeting of the Committee on March 24, 1966, Keith Long, Ph.D., of the U. of I. Institute of Agricultural Medicine, Robert A. Carter, M.D., assistant dean for postgraduate medical education at the U. of I., and Miss Helene Deming, acting director of the Division of Farm, Home and School Safety in the State Department of Health, spoke of the dangers posed by organophosphate insecticides, and suggested programs on the subject for doctors in various parts of the state, perhaps at the regular meetings of county medical societies.

They pointed out that the use of such materials on Iowa farms is increasing; that poisonings with such materials constitute dire emergencies for which physicians must have antidotes and treatment methods ready for immediate use; and that the differential diagnosis in such cases is often hazardous and difficult.

Parathion, it was mentioned, is gaining popularity as a suicidal and even a homicidal agent. Ingestion of only a few drops, or a drop or two in the eye are quickly fatal. A lethal dose can be absorbed through the skin, if the powdered material is handled carelessly, and manufacturers and retailers aren't succeeding in making farmers sufficiently aware of its dangers.

Dr. Carter said the U. of I. College of Medicine proposes, at its own expense and on invitation, to send a panel consisting of a chemist, one or more physicians and a member of the State Health Department's staff, to speak to doctors at county medical society meetings. Such a panel had already addressed the Johnson County Medical Society.

The IMS Rural Health Committee members who were present agreed to arrange dates on which their respective county medical societies could hear the panel. Since it seemed unlikely that more than that number of meetings could be scheduled before summer, it was decided to postpone a mailing to the other county medical societies, suggesting that they too should arrange such programs. The format, it was agreed, could consist of a dinner meeting for physicians, and a public meeting afterward.

It was agreed that the subject should be put on the program of the 1967 Refresher Course for General Practitioners, and on the program of a general meeting of the IMS, as soon as possible. The doctors present noted that a scientific article on the subject had appeared in the January, 1966, JOURNAL OF THE IOWA MEDICAL SOCIETY, and that a lecture on organophosphorus pesticides attracted remarkably great interest at the recent annual meeting of the Sioux Valley Medical Society. Late during the coming summer, it was further agreed, the IMS will send out a letter urging additional county medical societies to invite the U. of I. team to address their respective meetings.

Dr. Carter reported that the Extension Division at Iowa State University has offered funds to help pay for a 45-minute color movie on the subject, and that the U. of I. College of Medicine will film it, but that the job doubtless will take a year or more.

At the same meeting of the Rural Health Committee, Dr. James F. Speers, director of the Division of Regional and Community Health Services in the State Department of Health, told the Committee members about changes in the public health section of the Code of Iowa (Ch. 137) for which his Department proposes to ask the 1967 General Assembly. He noted that Chapter 137 was enacted in 1866—exactly 100 years ago—and that the problems with which its authors intended it to deal were quite different from those that exist now.

First, Dr. Speers said, the Department of Health will seek a change in the composition of local boards of health so that they will consist of knowledgeable people, including one or more physicians each. Second,

a means of preventing the overlapping of jurisdictions will be sought. Third, the Department will ask for a special tax—on a luxury item such as cigarettes, soft drinks or cosmetics—the proceeds of which can be distributed to local or regional health departments primarily on the basis of population, but secondarily on the basis of the personnel that they have hired and the services that they are prepared to offer. At present, Dr. Speers acknowledged, the law permits counties to join in various activities, but an offer of increased subsidies would give them an incentive for establishing multi-county health departments, and for hiring sanitarians, full-time public health officers (M.D.), and public health nurses. When Committee members asked him whether physicians are available to serve as full-time public health officers, he replied that though scarce, they can be found.

Dr. Speers said a series of regional meetings has been planned, in cooperation with the ISU Extension Division, at which to inform the public about the Department's objectives in the local and regional public-health field. A pilot meeting was held at Storm Lake several months ago, and 14 or 15 more will be conducted.

He estimated that a complete public-health program would cost $2 per year per person, or about $5 million per year for the state.

J. W. GAUGER, M.D., *Chairman*

COMMITTEE ON RADIATION CONTROL

(Referred to the Reference Committee on Legislation and Medical Service.)

The Advisory Committee on Radiation Control to the State Department of Health met on March 4 to consider further the possibility of legislation in this area. Three members of the Society's Committee on Radiation Control were present.

Careful review was made at this meeting of a radiation control bill drafted by the Department of Health. Certain revisions were recommended by the Advisory Committee at this meeting, and these recommendations now have been incorporated into the proposed legislation. It is contemplated the State Board of Health will consider the proposal at its May meeting. If the draft is approved by the Board it will be introduced and supported during the 1967 Iowa General Assembly by the Department of Health.

Following is the explanation which accompanies the bill:

"The problem of protecting workers and the general public against unnecessary radiation is one which faces both federal and state governments. Federal legislation now provides for the transfer of jurisdiction of certain aspects of atomic energy to the states, with the transfer made only to states having regulatory legislation and adequate regulatory control programs. In considering the hazards of ionizing radiation, it has become evident that control should involve all types of ionizing radiation, in addition to those sources covered by the Atomic Energy Act.

"This bill establishes a state radiation protection program, with administration of the program, and the duty of promulgating rules and regulations with respect to prevention of excessive radiation exposures, placed in the State Department of Health. Provision is made for the creation of an Advisory Council to be appointed by the Commissioner of Public Health, and to serve without compensation. The bill provides an initial appropriation.

"This bill will not interfere with present professional practices."

The IMS House of Delegates has previously been made aware of and has endorsed the Committee's interest in the formulation of effective legislation in this area. In 1963 the House of Delegates urged the fullest possible support of radiation control legislation. If the 1966 House of Delegates sees fit to reaffirm this past endorsement of sound legislation in this area, the Committee on Radiation Control recommends the Legislative Committee be instructed to maintain a scrutiny over this bill during the 1967 Iowa General Assembly and do what seems appropriate to assist in its passage.

F. R. PETERSON, M.D., *Chairman*

STATE CLAIMS REVIEW COMMITTEE

(Referred to the Reference Committee on Legislation and Medical Service.)

Since the 1965 Iowa Medical Society Annual Meeting, the State Claims Review Committee has been asked to handle six cases involving physicians' services which were referred to the Iowa Medical Society by various third parties. Because of the importance of this review process in assuring physicians at the local level a voice in the final adjudication of problem cases, it was felt the House of Delegates would be interested in receiving a report on the types of cases reviewed and the actions taken in each instance. The administrative functions followed in reviewing these cases have sometimes proven cumbersome, and the House of Delegates may wish to give consideration to proposing methods of streamlining the review process.

Case No. 1: The first case reviewed involved services rendered by a physician at the University Hospitals in Iowa City. Services were rendered to a private patient who was covered by a Blue Shield/Blue Chip contract. The case was forwarded to the Johnson County Medical Society and considered by its local claims review committee. The county committee, after reviewing all facts relating to the case and recognizing certain special factors relating to the University Hospitals, recommended that the physician's bill as submitted was completely justifiable and reasonable with reference to the Blue Chip contract language. The State Claims Review Committee agreed with the recommendation of the Johnson County Medical Society and referred the matter to the IMS president for transmittal to Iowa Medical Service.

Case No. 2: This case also involved a Blue Shield/Blue Chip contract for services rendered by a physician in western Iowa, specifically a cholecystectomy with a common bile duct exploration. Following normal procedure, the case was referred to the county medical society which determined that the fee submitted represented the physician's customary charge for this service and it did not exceed the general level of charges by others who render such services within that locality. The State Claims Review Committee agreed with the recommendation of the county medical society and notified the IMS president who transmitted the findings to Iowa Medical Service.

Case No. 3: A private insurance company referred to the Iowa Medical Society a case involving services rendered by a physician in one of Iowa's major cities. This contract agreed to pay physicians' reasonable and customary charges. In this specific case payment had already been made to the physician for an amount less than his submitted charges. The company requested guidance as to whether or not its payment

would be considered a reasonable fee in that locality. The entire file in this case was referred to the local county medical society; and its claim review committee, after a most comprehensive review, determined that the payment made by the insurance company had been reasonable and recommended that the physician accept this payment. This finding was transmitted to the insurance company through normal channels.

Case No. 4: Case No. 4 was referred to the IMS by an attorney on behalf of his client with regard to an open reduction of a fractured hip by a physician located in a metropolitan area but whose services had been given in a rural community some distance from the metropolitan area. The attorney requested guidance on whether or not the fee was reasonable for like services rendered in that locality. The case was referred to the county medical society. The county committee found that the fee was reasonable in view of the circumstances and was in the range of usual and customary charges for comparable services under comparable circumstances by other physicians in that area. This finding was transmitted to the attorney.

Case No. 5: The State Department of Social Welfare referred to the Iowa Medical Society a case involving services rendered to a recipient of Medical Aid to the Aged. The particular case involved services rendered by two physicians for surgery and follow-up care. Payment had been made to both, and the doctor rendering the follow-up care had requested that his payment which had been reduced by the State Department of Social Welfare be reconsidered. The county medical society after reviewing all factors determined that the payment made by the State Department of Social Welfare had been fair and reasonable in light of the services rendered and in view of the prevailing medical practices in that locality. The State Claims Committee concurred in the findings of the county society and forwarded the recommendation to the IMS president for transmittal to the State Department of Social Welfare.

Case No. 6: The last case referred to the Iowa Medical Society was also a case involving services rendered under the MAA program. This case involved a long period of hospitalization for an MAA recipient. The State Department of Social Welfare felt perhaps other arrangements could have been made for care of the patient at less expensive facilities but still maintaining the type of service required for care of the patient. The period of hospitalization extended over several months and involved a visit by a physician on each day of hospitalization. The county medical society determined that the hospitalization and physician charges were justified and that complete payment should be authorized. The State Claims Review Committee concurred with the county medical society, though two members of the State Claims Committee voted against the county recommendation. Normal channels were followed in transmitting this recommendation back to the State Department of Social Welfare.

Many of the above outlined cases involved telephone conversations, several letters and in some cases, a personal consultation. As indicated in the HANDBOOK Report, the House of Delegates may want to consider recommendations which will streamline the process of reviewing these cases. Consideration might be given to reducing the size of the State Claims Review Committee along with other possible procedure modifications. It is also recommended that whenever possible the local county medical society review committee provide the physician involved in any case under review an opportunity for a hearing.

R. S. GERARD, II, M.D., *Chairman*

AD HOC COMMITTEE ON AREAWIDE HEALTH FACILITIES PLANNING

(Referred to the Reference Committee on Miscellaneous Business.)

As reported in the 1966 HOUSE OF DELEGATES HANDBOOK, the Ad Hoc Committee on Areawide Health Facilities Planning has successfully launched a statewide voluntary areawide planning program.

On October 27, representatives from numerous and various professional voluntary health, state governmental and commercial agencies attended a conference on areawide health facilities planning at the IMS headquarters office, and at that time it was agreed that a voluntary planning council should be formed.

As Chairman of the Society's Ad Hoc Committee, I was requested to serve as temporary chairman of the planning council, and to appoint a steering committee to develop specific recommendations regarding the purpose, objectives, function, membership, and other details pertaining to the formation of a council.

The steering committee met on February 7, 1966, and again on March 24, 1966. I shall now summarize the recommendations made and actions taken by this group:

1. Articles of Incorporation of the HEALTH PLANNING COUNCIL OF IOWA were developed by the Steering Committee, in consultation with IMS legal counsel, and were recently filed with the Secretary of State. Listed in the articles are the names of the 6 initial directors of the Council, nominated by organizations whose nominations are tantamount to election. These directors are: Iowa Medical Society, Homer L. Skinner, M.D.; Iowa Society of Osteopathic Physicians and Surgeons, Joseph B. Baker, D.O.; Iowa Hospital Association, Mr. Donald Conroy; Iowa Nursing Home Association, Mr. Alden R. Godwin; Iowa State Department of Health, Mr. F. W. Pickworth; University of Iowa College of Medicine, Mr. John Bartlett.

Later in this report, I shall elaborate further on the function and membership of the Board of Directors.

2. The purpose and objects of the HPCI, as defined in the articles, are as follows: The exclusive objects and purposes of the corporation shall be to engage in, assist, further, promote and contribute to the support of such charitable, educational and scientific activities and projects, within the State of Iowa, as are, in general, either directly or indirectly related to health. Without limiting the generality of the foregoing, such objects and purposes shall include the following pertaining to Health Facilities and Services:

a. To assist in the conservation of funds utilized in the construction and operation of health facilities and the development of health services.

b. To avoid unnecessary duplication and achieve maximum use of existing medical services and facilities.

c. To assure and maintain the high quality of medical care.

d. To establish a consolidated system of data collection concerned with demography; available health facilities, including hospitals, health services; and the utilization of the facilities and services.

e. To inform the public, the health professions and health agencies, both the official and the voluntary, of the present facilities and of projections for expan-

sion of existing facilities or establishment of new ones; and to supply estimates for capital expenditures and for operating costs.

f. To develop local or regional planning councils and, through pertinent research, to develop criteria and guidelines that will assist such organizations.

g. To act in an advisory capacity to assist in the development of local planning to improve health facilities and services in the state; and to help in the evaluation of needs for additional facilities and services, or curtailment of other facilities and services.

h. To stimulate close working relationships with state and local agencies and paramedical organizations to the end that individual community health be assured optimum facilities and services.

3. Proposed By-laws of the HPCI were also developed by the Steering Committee, in consultation with IMS legal counsel. The proposed By-laws include many provisions, which are summarized as follows:

a. There shall be three classes of membership, namely, (1) organizational members; (2) associate members and (3) honorary members.

Any organization, the activities, purposes or objects of which are compatible with those of the corporation, may be elected to organizational membership by a majority of the members of the Board of Directors. Each organizational member shall have one vote in any election at which organizational members are authorized to vote, as provided in the By-laws. Associate membership will be conferred upon any person or organization making application, with approval by the Board of Directors. A majority of the Board of Directors may elect to honorary membership any person who has made an outstanding contribution in the field of voluntary areawide planning of health services and facilities. Associate and honorary members shall receive mailings from the corporation, as authorized by the Board of Directors, and shall be invited to attend and participate in meetings of the membership, without vote.

b. A 21-member Board of Directors shall be created, with five categories of nomination, as follows:

I. Six designated directors (to be nominated by the following organizations, with nomination tantamount to election):

Iowa Medical Society
Iowa Society of Osteopathic Physicians and Surgeons
Iowa Hospital Association
Iowa Nursing Home Association
Iowa State Department of Health
University of Iowa College of Medicine

II. Four representative directors (to be elected by the outgoing Board from nominations submitted by the following designated organizations):

Iowa Nurses Association
Iowa League for Nursing
Iowa Practical Nurses Association
Iowa Pharmaceutical Association
Iowa Dental Association
Iowa Veterinary Medical Association
Health Insurance Council
Blue Cross (Des Moines Plan)
Blue Cross (Sioux City Plan)
Iowa Medical Service (Blue Shield)
Des Moines College of Osteopathic Medicine and Surgery
State Board of Control
State Board of Social Welfare

III. Two regional directors (to be elected by the outgoing Board from nominations submitted by local or regional health councils approved by the Board).

IV. Four consumer directors (to be elected by the outgoing Board from nominations received on the following basis):

(a) Iowa General Assembly (nomination to be solicited from the Governor of Iowa)
(b) Rural (nominations to be solicited from Iowa Farm Bureau Federation, Farmers Union, and National Farmers Organization)
(c) Urban (nominations to be solicited from AFL-CIO, and League of Iowa Municipalities)
(d) At-large (nominations to be solicited from Iowa League of Women Voters)

V. Five membership directors (to be nominated and elected by the organizational members at the annual meeting of the members of the corporation).

c. Officers of the HPCI shall include a president, vice-president, second vice-president, secretary and treasurer.

d. The Board of Directors shall be provided authority to create and appoint members of an executive committee, advisory committees, or other committees as may be appropriate to assist in the conduct of the affairs of the corporation.

A general meeting of the HPCI will be held on Thursday, May 5 at the Society's headquarters building to which all interested organizations have been invited to send representatives. Copies of the Articles and proposed By-laws have also been provided to the invitees, and will be reviewed at the meeting for consideration and comment by those in attendance.

Prior to the March 24 meeting of the Steering Committee, nominations for election to membership on the Board of Directors were solicited from the various organizations, as previously outlined. In addition to the 6 initial directors nominated by organizations whose nominations are tantamount to election, 15 nominations were received. It will be recommended at the May 5 meeting that the 15 additional nominees be elected to serve on the first 21-member Board of Directors for a term of one year; further, that in subsequent years, nominations be solicited and candidates elected as specified in each of the five designated categories.

Immediately following the general meeting on May 5, and subject to any specific recommendations approved by those in attendance, the six initial directors, as named in the Articles, will meet to adopt formally and ratify the By-laws for subsequent filing with the Secretary of State; thereupon, a meeting of the full 21-member Board will convene.

To date, the Iowa Medical Society has assumed all financial responsibility relative to the formation of the HPCI. However, all possible methods of financing the operation and projects of the Council will be investigated, including the use of matching federal funds, and it is contemplated that membership dues will be established in order to provide for further organizational and operating expenses.

Members of the IMS Executive Council have been kept apprised of the progress that has been made in this endeavor, and no objections have been expressed. It is hoped that this House of Delegates will approve of the actions that have been taken relative to the creation of the Health Planning Council of Iowa.

H. L. SKINNER, M.D., *Chairman*

Resolutions

BLACK HAWK COUNTY MEDICAL SOCIETY

NO. 1. JOURNAL OF IOWA MEDICAL SOCIETY

(Referred to the Reference Committee on Report of Officers.)

WHEREAS, The scientific literary value of the JOURNAL OF IMS is better provided by other medical journals readily available to all doctors; and

WHEREAS, The prestige value of the JOURNAL has been greatly overestimated, and whereas the prestige of the Iowa medical profession may much better be achieved by professional actions than by the subterfuge of a slick-paper publication; and

WHEREAS, An excessive proportion of members' IMS dues is currently being used to subsidize the JOURNAL's publication, and whereas, this approximate $20,000 annually might better be used to reduce membership dues or to reduce the Society's indebtedness; now therefore be it

Resolved, That the JOURNAL IMS in so far as possible be put on a pay-for-itself basis and if necessary reduce to contain only such items as editorials, personals, state health department news, woman's auxiliary news, informational bulletins, and classified and professional ads, plus any other advertising that can be obtained for such a restricted publication.

CLINTON COUNTY MEDICAL SOCIETY

NO. 2. SELF APPOINTED SPECIALISTS—YELLOW PAGE CLASSIFICATION

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Most communities have "Yellow Pages" in their telephone directories to assist people in locating doctors and other advertisers promptly; and

WHEREAS, Listings in the general and special classifications of said "Yellow Pages" are accepted by the telephone company on the basis of the subscribers' instructions and without question as regards qualifications; and

WHEREAS, Many men thus identified as specialists are not entitled to such listings by present standards of medical practice; therefore be it

Resolved, That before any man may have a specialty heading of any type in a classified telephone directory, his application must be approved by his local medical society.

HUMBOLT COUNTY MEDICAL SOCIETY

NO. 3. PHYSICIAN IMMUNITY FROM LIABILITY

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The district councilor has called the attention of members of the Humboldt County Medical Society to the fact that individual members of certain committees have been reluctant to take specific action on matters pertaining to ethics, grievances or other such issues because of the possibility of becoming involved in personal liability lawsuits; therefore be it

Resolved, That the Iowa Medical Society assume all liability of committee members serving in any official capacity; and be it further

Resolved, That the Iowa Medical Society undertake to defend such committee members, individually or collectively, in any lawsuit developing over any action they have taken.

CLAYTON COUNTY MEDICAL SOCIETY

NO. 4. USUAL AND CUSTOMARY FEE—P.L. 89-97

(Referred to the Reference Committee on Legislation and Medical Service.)

Resolved, That the Clayton County Medical Society support and encourage the Iowa Medical Society in attempting to maintain the usual and customary fee concept under the Medicare program.

FIFTH COUNCILOR DISTRICT CAUCUS

NO. 5. FISCAL AGENT TITLE XIX—P.L. 89-97

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Under Title 18 (Medicare) an independent fiscal agent has been mandatory as the administrator for the medical benefits of the Medicare Program; and

WHEREAS, Under Title 19 the choice of fiscal agent is the prerogative of the Department of Social Welfare administering the program in the State of Iowa; and

WHEREAS, The Department of Social Welfare which administers the Medical Assistance Program to the Aged in Iowa has chosen to remove the independent fiscal agency aspect and have the state agency perform the functions of the fiscal agent; and

WHEREAS, A similar approach would be anticipated under Title 19, where the state agency enters into an agreement to pay the supplementary medical insurance program premiums on behalf of its aged welfare recipients; therefore be it

Resolved, That the Iowa Medical Society through appropriate committees and individuals exert all possible influence to have the fiscal agent under Title 19 be an independent health insurer and not an agency of the state government.

DES MOINES COUNTY MEDICAL SOCIETY

NO. 6. HOSPITAL-BASED SPECIALISTS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The so-called hospital-based specialists are engaged in the practice of medicine; therefore be it

Resolved, That the House of Delegates of the Iowa Medical Society endorse the action taken by the House of Delegates of the American Medical Association in special session in Chicago, October, 1965, relating to billing methods of hospital-based specialists, to wit:

"Hospital-based medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, billed and collected by the medical specialist in the same manner as are the fees of other physicians. The American Medical Association intends to continue vigorously its efforts to prevent inclusion in the future of the professional services of any practicing physician in the hospital service portion of any health care legislation."; and be it further

Resolved, That copies of this resolution and action be promptly disseminated to all members of the Iowa Medical Society.

POLK COUNTY MEDICAL SOCIETY

NO. 7. FISCAL AGENT TITLE XIX—P.L. 89-97

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Under Title 18 (Medicare) an independent fiscal agent has been mandatory as the administrator for the medical benefits of the Medicare Program; and

WHEREAS, Under Title 19 the choice of fiscal agent is the prerogative of the Department of Social Welfare administering the program in the State of Iowa; and

WHEREAS, The Department of Social Welfare which administers the Medical Assistance Program to the Aged in Iowa has chosen to remove the independent fiscal agency aspect and have the state agency perform the functions of the fiscal agent; and

WHEREAS, A similar approach would be anticipated under Title 19, where the state agency enters into an agreement to pay the supplementary medical insurance program premiums on behalf of its aged welfare recipients; therefore be it

Resolved, That the Iowa Medical Society, through appropriate committees and individuals, exert all possible influence to have the fiscal agent under Title 19 be an independent health insurer and not an agency of the state government.

G. K. VAN ZEE, M.D., DELEGATE MARION COUNTY MEDICAL SOCIETY

NO. 8. TERMINATION OF A PREGNANCY

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The state laws today, concerning the termination of a pregnancy, neither are in keeping with the trend of public opinion, nor serve the best interests of the woman who finds herself with an unwanted pregnancy; and

WHEREAS, A poll showed that 43 per cent of the people would favor a liberalization of our laws concerning the termination of a pregnancy; and

WHEREAS, The medical profession has failed publicly to

express any forthright opinion concerning this most archaic law; and

WHEREAS, Our rigid law causes a woman who is determined to end her pregnancy to go to a criminal abortionist, with the risk of an infection and death, or being maimed for life; and

WHEREAS, It is estimated that 5,000 women (some estimate 10,000) die every year, here in the U. S., at the hands of criminal abortionists; and

WHEREAS, The American Law Institute produced the Model Penal Code which broadens the indications for therapeutic abortion to include the termination of the pregnancy not only when the mother's life is endangered, but also when the pregnancy has resulted from rape or incest, and when the birth of a seriously deformed child may result; and

WHEREAS, Several studies have indicated that one out of every five pregnancies is terminated by illegal abortion. (This sets the total of illegal abortions at more than a million a year.); and

WHEREAS, The population explosion requires the serious attention of the medical profession; and

WHEREAS, The medical profession should lead rather than follow public opinion; and

WHEREAS, The Board of Trustees of the AMA, upon the advice of the committee on Human Reproduction, recommended to the House of Delegates, that legislation be enacted concerning abortion providing that:

(1) A licensed physician can terminate a pregnancy if he can reasonably establish that:

A. There is substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the mother, or

B. There is substantial risk that the child will be born with grave physical or mental defect, or

C. The pregnancy resulted from legally established statutory or forcible rape or incest.

(2) Abortion shall be performed only in licensed hospitals.

(3) An abortion shall not be performed unless two licensed physicians, neither of whom may be performing the abortion, shall have certified in writing the circumstances which justify the abortion; therefore be it

Resolved, That the Iowa Medical Society endorse the above resolution of the AMA Board of Trustees for state legislation, and declare its willingness to support such legislation, if it is introduced in our state assembly.

WOODBURY COUNTY MEDICAL SOCIETY

NO. 9. IMMUNITY FROM LIABILITY—PROFESSIONAL SOCIETIES—HOSPITAL STAFF

(Referred to the Reference Committee on Legislation and Medical Service.)

Resolved, That the Iowa Medical Society support enactment of legislation in the next General Assembly, relating to immunity of liability of certain members of professional societies, or appointed members of a committee of a medical staff of certain hospitals—similar to legislation enacted into law by South Dakota and other states.

SCOTT COUNTY MEDICAL SOCIETY

NO. 10. BLUE SHIELD CONTRACTS—USUAL AND CUSTOMARY FEES

(Referred to the Reference Committee on Blue Shield.)

WHEREAS, The Iowa Medical Society has established the principle of the "usual and customary fee" as a basis for negotiations with third parties who undertake to pay for medical care, and

WHEREAS, This official position is weakened by acceptance of any plan whereby payment for professional services is at a level lower than the usual and customary fee, and

WHEREAS, With third parties Blue Shield continues to negotiate full-service policies with benefits below this level; therefore be it

Resolved, That this House of Delegates instruct the Board of Trustees and the Blue Shield Liaison Committee to work diligently with the Blue Shield Board of Directors toward eliminating all Blue Shield policies the benefits of which are lower than the usual and customary fee level; and be it further

Resolved, That this elimination be carried out and reported by the Trustees to this House at its 1967 meeting.

MARSHALL COUNTY MEDICAL SOCIETY

NO. 11. PHYSICIAN BILLING PROCEDURE—P.L. 89-97

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The personal, sacred and venerable doctor-patient relationship, which the medical profession has endeavored to protect and preserve through the years, now stands in jeopardy; and

WHEREAS, The federal government has chosen under Public Law 89-97 to intervene and to assume responsibility for financing the medical care of certain segments of the population; and

WHEREAS, The physician's particular responsibility is to the patients he serves, regardless of the third party involved; therefore be it

Resolved, That the Iowa Medical Society urge its members to study carefully the several mechanisms available for compensating physicians for services rendered under P.L. 89-97; and be it further

Resolved, That the Iowa Medical Society advance to the fullest extent feasible the concept of individual responsibility, a concept in which the physician's relationship is directly and fully with his patient, both in providing medical care and in collecting his usual, customary and reasonable charge for the services rendered; and be it further

Resolved, That inasmuch as the reimbursement provisions of P.L. 89-97 allow the patient to assume his rightful responsibility, the physicians of Iowa be encouraged insofar as possible to advocate this course, and NOT elect to employ the assignment mechanism; and be it further

Resolved, In summation, that the Iowa Medical Society encourage its members to present to their patients their own statements of charges and accept compensation directly from patients for the professional medical services rendered; and be it finally

Resolved, That if the Iowa Medical Society House of Delegates endorses this Resolution that it be transmitted to the officers of the AMA and to members of its House of Delegates for their information.

JOHNSON COUNTY MEDICAL SOCIETY

NO. 12. CONTINUING FLOW OF PATIENTS TO UNIVERSITY OF IOWA HOSPITALS FOR TEACHING PURPOSES

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The College of Medicine in conjunction with the University Hospitals of Iowa City is the only institution in the state of Iowa which can replicate the complete physician; and

WHEREAS, If professional education were to be conducted entirely without the benefit of the advice and participation of active members of the profession it could easily become sterile and unresponsive to public need; and

WHEREAS, The art and science of medicine cannot be properly taught except by precept, in the actual care and handling of patients; and

WHEREAS, Physicians over the state of Iowa have historically aided the training of medical students by generous referral of private, clinical pay, and indigent patients to the several departments in the College of Medicine; and

WHEREAS, Under the Medicare Law (Public Law 89-97); Part B will have a profound effect on financing medical care of the over-65 population; and Title 19, when implemented, will have a similar effect on the indigent and "near needy" peoples (estimated at 150,000 in Iowa); therefore be it

Resolved, That the Iowa Medical Society House of Delegates instruct the Society to continue to foster a flow of patients for teaching purposes to the University Hospitals; and be it further

Resolved, That this resolution be transmitted to all constituent county medical societies of the Iowa Medical Society.

CERRO GORDO COUNTY MEDICAL SOCIETY

NO. 13. COMMUNITY MENTAL HEALTH CENTERS

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Community mental health centers are operated by private citizens with a board of directors empowered to hire professional staff; and

WHEREAS, The county boards of supervisors have been quite satisfied to be billed on a case number basis; and

WHEREAS, It is felt that patient anonymity should be preserved; therefore be it

Resolved, That no patient names be given in the billings by mental health centers to the various participating counties.

HARDIN COUNTY MEDICAL SOCIETY

NO. 14. BILLING OF MEDICARE PATIENTS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The Senate and House of Representatives as-

sembled as the 89th Congress of the United States of America, passed Public Law 89-97 known as "The Social Security Amendments of 1965"; and

WHEREAS, Title 18, Part B, of said Public Law 89-97, Section 1832 and Section 1833, permit the individual physician to charge the patient and give the patient a receipted bill and a completed claim form and then the patient deals directly with the fiscal intermediary to obtain 80 per cent of the reasonable charge; and

WHEREAS, We, the members of the Hardin County Medical Society, feel that in order for a physician to remain in private practice, have unanimously voted to use this option; and therefore be it,

Resolved, That all county societies of the Iowa Medical Society also use this option of Part B.

WEBSTER COUNTY MEDICAL SOCIETY

NO. 15. UTILIZATION COMMITTEES

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Present and impending conditions in Iowa hospitals will increasingly tend to cause overutilization of hospital facilities by patients whose hospital expenses are paid by third parties; and

WHEREAS, There are and will be increasing demands by such third parties to compel physicians to assume distasteful and burdensome police functions to limit such overutilization by establishing so-called "utilization committees" in hospitals; and

WHEREAS, These trends and pressures could soon lead to overburdening practicing physicians with onsought and unwelcome administrative duties in addition to their already heavy professional duties; now therefore be it

Resolved, That the Iowa (Webster County) Medical Society reaffirm the right of Iowa physicians to decide for themselves the nature and extent of their participation in any and all administrative programs which seek to regulate or limited to an advisory function in adjudicating disputed cases only. The Iowa Medical Society further affirms that physicians should be reasonably compensated for the time which they devote to such administrative activities.

WEBSTER COUNTY MEDICAL SOCIETY

NO. 16. FISCAL AGENT (CARRIER)—TITLE 19

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Under Title 18 (Medicare) an independent fiscal agent has been mandatory as the administrator for the medical benefits of the Medicare Program; and

WHEREAS, Under Title 19 the choice of fiscal agent is the prerogative of the Department of Social Welfare administering the program in the State of Iowa; and

WHEREAS, The Department of Social Welfare which administers the Medical Assistance Program to the Aged in Iowa has chosen to remove the independent fiscal agency aspect and have the State agency perform the functions of the fiscal agent; and

WHEREAS, A similar approach would be anticipated under Title 19, where the State Agency enters into an agreement to pay the supplementary medical insurance program premiums on behalf of its aged welfare recipients; therefore be it

Resolved, That the Iowa Medical Society through appropriate committees and individuals exert all possible influence to have the fiscal agent under Title 19 be an independent health insurer and not an agency of the State government.

LIFE AND ASSOCIATE MEMBERSHIPS

LIFE MEMBERSHIP RECOMMENDED ON THE BASIS OF 50 YEARS' PRACTICE AND 30 YEARS' MEMBERSHIP

County	*Name*
Cerro Gordo	Thomas A. Burke, Mason City
Floyd	Floyd H. Fillenwarth, Charles City
Johnson	Harry R. Jenkinson, Iowa City
Marshall	Raymond S. Grossman, Marshalltown
	Bernard L. Trey, Marshalltown
Palo Alto	Harold L. Brereton, Emmetsburg
Polk	James E. Dyson, Phoenix, Arizona
	Frank W. Fordyce, Des Moines
	Verl A. Ruth, Des Moines
	Ralph R. Simmons, Bloomfield, Connecticut
Scott	Elmer G. Senty, Davenport
Webster	Harry F. Kiesling, Lehigh
Winneshiek	John G. Goggin, Ossian
Woodbury	T. Roy Gittins, Sioux City

ASSOCIATE MEMBERSHIPS RECOMMENDED ON THE BASIS OF RETIREMENT OR INCAPACITATION

County	*Name*
Adair	Charles D. Shope, Greenfield
Dallas-Guthrie	Robert T. Smith, Granger
Story	Joseph G. Fellows, Ames

The physicians nominated for each of these membership categories were then approved unanimously.

The Speaker then announced the meeting places for the various reference committees and said that they would convene at 2:30 that afternoon. Delegates were informed that the House of Delegates would convene Wednesday morning, April 27, at 8:00 in the Grand Ballroom of the Savery Hotel. They were asked to report promptly. The House adjourned at 1:10 p.m.

WEDNESDAY SESSION, APRIL 27, 1966

The Wednesday session of the House of Delegates was called to order at 8:15 a.m. The House approved the taking of attendance by registration cards. There were 98 delegates, 12 voting alternates and 14 ex-officio members present.

County	*Delegate*	*Alternate*
County	*Delegate*	*Alternate*
Adair		
Adams		
Allamakee	M. F. Kiesau	
Appanoose	E. A. Larsen	
Audubon		
Benton		
Black Hawk	F. G. Loomis	
	A. M. Dolan	
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan		
Buena Vista	T. E. Shea	
Butler		
Calhoun		
Carroll	H. L. Skinner	
Cass		
Cedar		
Cerro Gordo	L. C. Orton	
	W. N. Hanson	
	L. J. Kirkham	
Cherokee		
Chickasaw		
Clarke	G. I. Armitage	
Clay		
Clayton		
Clinton	M. E. Barrent	
	W. H. Ash	
Crawford	R. A. Huber	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	J. R. Scheibe	
Decatur-Ringgold	E. E. Gamet	
Delaware	J. E. Tyrrell	
Des Moines	J. F. Foss	
	J. L. Saar, Jr.	
Dickinson	D. F. Rodawig, Jr.	
Dubuque	K. K. Hazlet	
	D. A. Howell	
Emmet	H. A. Lindholm	
Fayette	R. S. Jaggard	
Floyd	C. L. Kelly, Jr.	
Franklin	R. E. Munns	
Fremont		
Greene		
Grundy		
Hamilton	G. A. Paschal	
Hancock-Winnebago	L. R. Fuller	
	S. M. Haugland	
Hardin	John Sear	
Harrison		
Henry	H. M. Readinger	
Howard	D. O. Maland	
Humboldt	Beryl Michaelson	
Ida	J. B. Dressler	
Iowa	D. F. Miller	
Jackson		
Jasper	J. W. Billingsley	
Jefferson	J. N. Morgan	
Johnson	K. R. Cross	
	J. M. Layton	G. R. Zimmerman
	Jack Moyers	
	C. E. Radcliffe	R. T. Soper
Jones	L. D. Caraway	

Keokuk		
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
		R. W. Conkling
	C. R. Aschoff	
Louisa		
Lucas		
Lyon		
Madison	J. E. Evans	
Mahaska	G. W. Bennett	
Marion	G. K. Van Zee	
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills	C. D. Stinard	
Mitchell		
Monona		
Monroe		
Montgomery	Oscar Alden	
Muscatine		K. E. Wilcox
O'Brien	J. C. Peterson	
Osceola	F. B. O'Leary	
Page		G. H. Powers
Palo Alto		
Plymouth	J. P. Trotzig	
Pocahontas	C. J. Smith	
Polk	W. R. Hornaday, Jr.	
	R. W. Anderson	
	R. B. Stickler	
		L. J. Galinsky
		J. W. Green
	A. N. Smith	
		J. T. McMillan
	J. H. Kelley	
	N. W. Irving, Jr.	
	Wallace Rindskopf	
	L. O. Ely	
		V. L. Schlaser
Pottawattamie	Hormoz Rassekh	
		M. E. Olsen
	I. J. Hanssmann	
Poweshiek	H. R. Light	
Sac	C. D. Gibson	
Scott	Erling Larson	
	W. D. Edgerton	
	R. P. Lagoni	
Shelby	J. F. Bishop	
	J. H. Spearing	
Sioux	T. E. Kiernan	
Story	G. E. Montgomery	
	R. H. Heise	
Tama	A. J. Havlik	
Union-Taylor	R. H. Kuhl	
	R. W. Boulden	
Van Buren		
Wapello	R. A. Hastings	
	R. P. Meyers	
Warren	Amalgamated with Polk County	
Washington	G. E. Montgomery	
Wayne	K. A. Garber	
Webster	H. H. Kersten	
	L. J. O'Brien	
Winneshiek		
Woodbury		H. E. Rudersdorf
	P. M. Cmeyla	
	W. P. Davey	
	C. L. Beye	
		W. M. Krigsten
Worth	B. H. Osten	
Wright	C. P. Hawkins	

LIAISON DELEGATES

C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

F. G. Ober	R. L. Wicks
S. P. Leinbach	L. W. Swanson
J. M. Rhodes	H. J. Smith
R. F. Birge	E. M. Smith
C. W. Seibert	P. M. Kersten
J. H. Sunderbruch	O. D. Wolfe
K. E. Lister	G. H. Scanlon

Dr. Birge read the minutes of the April 24 meeting of the House of Delegates, and the House approved them.

It was moved, seconded and voted that the secretary should cast a unanimous ballot for the unopposed candidates for election to IMS offices, and that a vote of the House should be conducted only to choose the Blue Shield Liaison Delegates. The following physicians were thus chosen:

President-elect	R. F. Birge, M.D., Des Moines
Vice-president	K. K. Hazlet, M.D., Dubuque
Secretary	V. L. Schlaser, M.D., Des Moines
Treasurer	T. A. Burcham, M.D., Des Moines
Trustee	J. H. Sunderbruch, M.D., Davenport
Speaker of the House	P. M. Kersten, M.D., Fort Dodge
Vice-Speaker of the House	J. L. Powers, M.D., Estherville
AMA Delegate	H. J. Smith, M.D., Des Moines
AMA Delegate	L. W. Swanson, M.D., Mason City
Councilor, District 3	J. M. Rhodes, M.D., Pocahontas
Councilor, District 5	R. L. Wicks, M.D., Boone
Councilor, District 10	E. E. Gamet, M.D., Lamoni

The delegates then cast ballots for candidates for the two offices of Blue Shield liaison delegates, and the following physicians were chosen:

Blue Shield Liaison Delegates to the IMS	C. V. Edwards, Sr., M.D., Council Bluffs
	C. N. Hyatt, M.D., Corydon

Dr. John Houghton, president of the Wisconsin State Medical Society, was introduced, and he addressed the House briefly.

Reference Committee Reports

The following reference committee reports were approved by the House of Delegates.

MISCELLANEOUS BUSINESS

The Reference Committee on Miscellaneous Business met in open session at 2:30 p.m., April 24, 1966. Interested members of the Society presented background material to the Committee so that deliberate consideration and discussion could be given to each referred item. The first item considered was Resolution No. 2.

RESOLUTION NO. 2—INTRODUCED BY CLINTON COUNTY MEDICAL SOCIETY ON SELF APPOINTED SPECIALISTS—YELLOW PAGE CLASSIFICATION

Your Reference Committee is sympathetic with the intent of this resolution. The AMA Judicial Council has pointed out that the public is entitled to know the names of physicians, the types of their practices, the locations of their offices, their office hours, and the like. The doctor may ethically furnish this information through the accepted local media of communication, which are open to all physicians on like conditions. Telephone listings are included in the list of acceptable media for making factual information available to the public.

However, the AMA Judicial Council has received a great many communications with respect to advertisements used by individual physicians, groups, clinics, pay clinics and hospitals owned by individuals or groups. Practically all of the advertising submitted has been found objectionable. The Judicial Council points out that the state society members who use objectionable advertising are responsible to and under the control of the censorial agencies of the societies of which they are members.

Because the propriety of the practice referred to in Resolution No. 2 falls within the purview of the Judicial Council, your Reference Committee recommends that Resolution No. 2 be referred to the IMS Judicial Council for study and later determination as to whether the advertising mentioned is in excess or is not in keeping with the ideals of medicine, and whether referral to the Iowa Board of Medical Examiners may be indicated.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON SAFE TRANSPORTATION

Your Reference Committee approves of this supplemental report in principle, but suggests that it be reviewed by IMS legal counsel and submitted to the IMS Executive Council for its final adoption prior to submission of the Department of Public Safety.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 13—INTRODUCED BY CERRO GORDO COUNTY MEDICAL SOCIETY ON COMMUNITY MENTAL HEALTH CENTERS

Your Reference Committee recommends adoption of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE AD HOC COMMITTEE ON AREAWIDE HEALTH FACILITIES PLANNING

Your Reference Committee should like to commend the IMS Ad Hoc Committee for the tremendous amount of work and planning that it has done in following the directives of the 1965 House of Delegates with respect to having the IMS show leadership in this entire area of voluntary areawide planning. It has proceeded with caution with respect to possible future legislation, and members of the committee indicate their awareness of the continuing need for physician leadership.

Your Reference Committee was informed by IMS legal counsel that the words "for subsequent filing with the Secretary of State" on page 4, fourth paragraph, are unnecessary and, therefore, should be deleted.

Your Reference Committee recommends the approval of the Supplemental Report of this Ad Hoc Committee with the deletion noted above.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

In conclusion I wish to express my appreciation to the members of this Reference Committee for their assistance and to the physicians and legal counsel who provided this committee with background information.

Respectfully submitted,

J. M. LAYTON, M.D., *Chairman*
L. J. KIRKHAM, M.D.
W. A. CASTLES, M.D.
B. H. OSTEN, M.D.
I. J. HANSSMANN, M.D.

LEGISLATION AND MEDICAL SERVICE

The Reference Committee on Legislation and Medical Service began its consideration of the assigned resolutions and supplemental reports by holding an open hearing at 2:30 p.m. Sunday, April 24, 1966. In a well attended open hearing which lasted three hours, all interested persons were given ample opportunity to express their opinions.

Following the open hearing, the Reference Committee met in several executive sessions to evaluate further the material referred to it. During these deliberations your Reference Committee developed the following report.

SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES, PART D, SECTION II, EXHIBITS E AND F DEALING WITH IMS/BLUE SHIELD RELATIONS, IN REFERENCE TO IMPLEMENTATION OF PART B—P.L. 89-97—MEDICARE

Your Reference Committee wishes to commend the officers of the Iowa Medical Society and Iowa Medical Service for their exhaustive efforts in behalf of the profession on matters relating to the implementation of Part B of Public Law 89-97. In this connection, your Reference Committee concurs that the Society is not only responsible, but obligated, to participate actively in establishing and implementing basic policies that may affect the practice of medicine. The appointment of Mr. Huston to serve on a temporary basis as Medicare coordinator for Blue Shield appears to be one sound means for accomplishing that which is set forth in the preceding sentence.

Mr. Speaker, I move adoption of this portion of the report.

The establishment of advisory committees, seven in number, consisting of representatives of both the Iowa Medical Society and Iowa Medical Service, to guide the Part B carrier in Iowa is without doubt a desirable approach. This will enable the thinking of many persons to be brought to bear on the problems present. Your Reference Committee recognizes the importance of Blue Shield holding strongly to the belief that its role in Public Law 89-97 is that of an independent carrier, not that of an intermediary of the federal government. Your Reference Committee also believes strongly that this independent carrier must have the responsibility and freedom to determine on its own, based on criteria set forth in the law, what constitutes usual, customary and reasonable charges for services rendered. Your Reference Committee is cognizant of the fact that certain items such as determination of reasonable charges are not negotiable. If the Department of Health, Education and Welfare is unwilling to contract with the carrier on this basis, and discussions reach an impasse, your Reference Committee sees no alternative but for Blue Shield to decline to serve as carrier.

Mr. Speaker, I move adoption of this portion of the report.

Lastly, relating to this supplemental report, your Reference Committee wishes to indicate its strong support of the proposed area meetings contemplated on Blue Shield's role as Part B Medicare carrier in Iowa. The Reference Committee believes all possible should be done to inform the membership on matters in this vital area.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF MEDICAL/HOSPITAL STATISTICAL SUBCOMMITTEE

Your Reference Committee is pleased to note the recent progress in this ambitious project undertaken by the Iowa Medical Society and the Iowa Hospital Association on a cooperative basis. This study appears to have the potential for providing a wealth of constructive information on patterns of hospital utilization in the state of Iowa, based on the preliminary findings included in the supplemental report. Your

Reference Committee urges the Medical/Hospital Statistical Subcommittee to continue its efforts in this pilot study, and to prepare its initial report with deliberate speed for submission to the Executive Council.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON PUBLIC ASSISTANCE

Your Reference Committee is cognizant of the far-reaching implications of Title XIX of P.L. 89-97, and of the fact that enabling legislation must be enacted by the 1967 Iowa General Assembly if the state is to have a program of this type. This being the case, your Reference Committee heartily endorses the recommendation made by this Subcommittee and urges the Society to maintain a close scrutiny over the development of enabling legislation for Title XIX in Iowa.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee also considers sound the request of the Subcommittee that it be permitted to take the lead in following the development of and advising on legislative proposals relating to Title XIX. Your Reference Committee asks that the Subcommittee on Public Assistance be provided the opportunity to meet with the Legislative Committee and other appropriate bodies for the purpose of determining the prudent course of action to be taken.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE RURAL HEALTH COMMITTEE

This supplemental report discusses two items: 1. a cooperative program with the University of Iowa College of Medicine to alert physicians to the dangers of organophosphate pesticide poisoning, and the technics for diagnosing and treating cases of it; and 2. proposed revisions in state legislation in the area of public health.

On the first matter, your Reference Committee believes the Society is pursuing a prudent course of action in seeking to obtain greater understanding by the public and the profession of the increasing problems relating to the use of pesticides. Your Reference Committee would encourage the Committee on Rural Health to continue its efforts to have this subject discussed at forthcoming meetings of county medical societies.

Mr. Speaker, I move the adoption of this portion of the report.

The second part of this report summarizes comments made to the Committee by Dr. James Speers, of the State Department of Health, concerning proposed changes in the state's public health laws. Your Reference Committee believes that this should be received as information only at this time.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF SUBCOMMITTEE ON RADIATION CONTROL

The House of Delegates previously has expressed its support of sound legislation in the field of radiation control. In addition to noting this past endorsement by the Society, your Reference Committee is aware also that members of the Committee on Radiation Control have had opportunity to make recommendations to the State Department of Health on the content of this bill. These factors considered, your Reference Committee recommends: 1. the House of Delegates reaffirm its past endorsement of sound legislation in this area; and 2. that the Legislative Committee be instructed to maintain a scrutiny over this bill during the 1967 Iowa General Assembly and do what seems appropriate to assist in its passage.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF STATE CLAIMS REVIEW COMMITTEE

It is vital that the medical profession do all within its power to obtain and retain the right to review and adjudicate those physicians' claims which are questioned by third parties. The opportunity and challenge which lies herein can only increase with the advent of Public Law 89-97. It appears the six cases referred to the State Claims Review Committee during the past year have been handled in an efficient manner, based on the commentary contained in the supplemental report.

Your Reference Committee feels that the State Claims Review Committee should be encouraged to do whatever may be necessary to insure the rapid processing of claims referred to the State Society. Your Reference Committee recommends the strengthening of local committees and suggests that the State Claims Committee consider formulating review guidelines for use by local review committees as they carry out their responsibilities in this area.

Your Reference Committee also agrees with the suggestion in the supplemental report that a physician involved in a case under review have opportunity for a hearing with his local committee.

Mr. Speaker, I move adoption of this portion of the report.

HANDBOOK REPORT OF AD HOC DEBAKEY STUDY COMMITTEE; REPORT OF DEAN ROBERT HARDIN TO HOUSE OF DELEGATES

Your Reference Committee considered these two items together. The DeBakey Committee, in its Handbook Report, requests that it be discharged inasmuch as the Heart Disease, Cancer and Stroke Amendments of 1965 (Public Law 89-239) have now become law, and inasmuch as the Iowa Medical Society is now represented on The Iowa Planning Committee. Your Reference Committee feels this request is valid and should be granted.

Mr. Speaker, I move adoption of this portion of the report.

Secondly, your Reference Committee wishes to acknowledge the report Dean Robert Hardin presented at the opening session of the House of Delegates. This lucid discussion of the complexities of Public Law 89-239 gave the members of your Reference Committee a better insight into what may be anticipated in Iowa. Your Reference Committee feels Dean Hardin is approaching this matter on sound ground by emphasizing its research and education aspects. Your Reference Committee also believes Dean Hardin exercised sound judgment in consulting with officers of the Iowa Medical Society during the early stages of the

current planning activities. Inasmuch as Iowa is now blessed with a medical program acknowledged to be similar in concept to that contemplated by this law, your Reference Committee agrees that careful and deliberate planning is in order, rather than a sketchy appraisal in a hasty attempt to obtain federal monies. Your Reference Committee wishes to commend the Society's Board of Trustees for its efforts in staying abreast of developments in this area, and we urge these officers to continue their close surveillance of this complex matter during the ensuing months.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 3 INTRODUCED BY HUMBOLDT COUNTY MEDICAL SOCIETY ON PHYSICIAN IMMUNITY FROM LIABILITY

Your Reference Committee, based on the advice of the Society's legal counsel and other authoritative comment presented at the open hearing, believes it would be unwise for the Society to assume *all* liability for those of its members who serve in an official capacity. Your Reference Committee is of the opinion: (1) that assuming *all* liability might expand the liability of the physician or the Society beyond that which might already exist; (2) that risk is remote to the point of being minimal; and (3) that the IMS By-Laws now provide for the Society to participate in the defense of a member physician upon his request and at the discretion of the Board of Trustees. This latter point is covered in Chapter 1, Section 5 and Chapter 5, Section 10 of the By-Laws.

Your Reference Committee urges the Society to remain vigilant to any conditions which may suggest a change in this position and it believes effort should be exerted to keep members alert to the need for embodying provisions of this type in their individual malpractice coverage.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 9 INTRODUCED BY WOODBURY COUNTY MEDICAL SOCIETY ON IMMUNITY FROM LIABILITY—PROFESSIONAL SOCIETIES—HOSPITAL STAFFS

In reviewing this Resolution which is similar in subject matter to Resolution No. 3 introduced by Humboldt County, your Reference Committee again has turned to legal counsel for advice. Your Reference Committee understands that existing court decisions make it clear that there is a qualified privilege for persons serving on committees of this sort and there is no liability in the absence of actual malice or bad faith. While this type of legislation would not necessarily be undesirable, it is not felt at this time to be a legislative priority. Therefore, your Reference Committee suggests the Society remain alert to the future need for legislation of this type, but it believes there is not an urgent need for immediate action.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 8 INTRODUCED BY G. K. VAN ZEE, M.D., DELEGATE, MARION COUNTY MEDICAL SOCIETY ON TERMINATION OF A PREGNANCY

This Resolution prompted considerable discussion during the open hearing of the Reference Committee. It is perhaps worthy to note that this matter has been studied by the AMA's Committee on Human Reproduction, considered by the AMA House of Delegates and referred back to the AMA Board of Trustees. Your Reference Committee believes the Iowa Medical Society should follow the developments of this issue at all levels, but it recommends no action at this time.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 12 INTRODUCED BY JOHNSON COUNTY MEDICAL SOCIETY ON THE CONTINUING FLOW OF PATIENTS TO UNIVERSITY OF IOWA HOSPITALS FOR TEACHING PURPOSES

Your Reference Committee recognizes that the flow of patients to the College of Medicine may be significantly affected following the implementation of Public Law 89-97. Facets of the Medicare Program will indeed have a profound effect on all segments of the medical profession. Your Reference Committee recommends the Society work with the College of Medicine in finding ways to meet and overcome this problem.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 15 INTRODUCED BY WEBSTER COUNTY MEDICAL SOCIETY ON RESOLUTION REGARDING UTILIZATION COMMITTEES

Your Reference Committee feels that utilization review committees can and should be used to improve patient care. Further, they should serve as a continuing means of assessing the quality of medical care rendered, much in the same manner as tissue and record committees have in the past. Your Reference Committee believes that even the purely administrative functions involved in utilization review deserve guidance from and require the surveillance of physicians.

On the matter of monetary compensation for the physicians who serve on utilization review committees, your Reference Committee notes that traditionally physicians have served on hospital committees without compensation. Although your Reference Committee supports this traditional position, Public Law 89-97 is permissive in allowing compensation for service on utilization review committees. Your Reference Committee feels this matter should be decided at a local level.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 4 INTRODUCED BY CLAYTON COUNTY MEDICAL SOCIETY ON USUAL AND CUSTOMARY FEE—PUBLIC LAW 89-97

Your Reference Committee is pleased to use this Resolution as a means of once again reaffirming the Society's strong belief in the usual and customary fee concept.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 5 INTRODUCED BY FIFTH COUNCILOR DISTRICT CAUCUS ON FISCAL AGENT TITLE XIX—PUBLIC LAW 89-97, AND RESOLUTION NO. 7 INTRODUCED BY POLK COUNTY MEDICAL SOCIETY ON FISCAL AGENT TITLE XIX—PUBLIC LAW 89-97, AND RESOLUTION NO. 16 INTRODUCED BY WEBSTER COUNTY MEDICAL SOCIETY ON FISCAL AGENT (CARRIER) TITLE XIX

As mentioned previously in this report, your Refer-

ence Committee believes the Society should maintain a close scrutiny over the development of enabling legislation for Title XIX of Public Law 89-97. Your Reference Committee urges that every possible effort be made to embody in state enabling legislation provisions for an independent health insurer to serve as carrier in any Title XIX program which may be implemented in Iowa, and that this concept be extended to all future government programs.

Your Reference Committee believes it appropriate to mention that the Supplemental Report of the Subcommittee on Public Assistance also contained a recommendation which essentially duplicates that which is set forth in the Resolutions considered herewith.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 6 INTRODUCED BY DES MOINES COUNTY MEDICAL SOCIETY ON HOSPITAL-BASED SPECIALISTS

Representatives of the two specialty groups primarily concerned with this Resolution spoke in favor of its adoption during the open hearing. Pursuant to this, and based on advice of legal counsel that the AMA policy statement cited is compatible with Iowa's House File 21, your Reference Committee recommends the House of Delegates approve this Resolution and endorse the AMA's belief that:

> "Hospital-based medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, billed and collected by the medical specialist in the same manner as are the fees of other physicians. The American Medical Association intends to continue vigorously its efforts to prevent inclusion in the future of the professional services of any practicing physician in the hospital service portion of any health care legislation."

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 11 INTRODUCED BY MARSHALL COUNTY MEDICAL SOCIETY ON PHYSICIAN BILLING PROCEDURE—PUBLIC LAW 89-97

Your Reference Committee was impressed with the content of this Resolution to the extent that it believes in recommending its adoption. It would be appropriate to reiterate the Resolves once again for the benefit of the House of Delegates:

Resolved, That the Iowa Medical Society urge its members to study carefully the several mechanisms available for compensating physicians for services rendered under Public Law 89-97; and be it further

Resolved, That the Iowa Medical Society advance to the fullest extent feasible the concept of individual responsibility, a concept in which the physician's relationship is directly and fully with his patient, both in providing medical care and in collecting his usual, customary and reasonable charge for the services rendered; and be it further

Resolved, That inasmuch as the reimbursement provisions of Public Law 89-97 allow the patient to assume his rightful responsibility, the physicians of Iowa be encouraged insofar as possible to advocate this course, and NOT elect to employ the assignment mechanism; and be it further

Resolved, In summation, that the Iowa Medical Society encourages its members to present to their patients their own statements of charges and accept compensation directly from patients for the professional medical services rendered; and be it finally

Resolved, That if the Iowa Medical Society House of Delegates endorses this Resolution that it be transmitted to the officers of the AMA and to members of its House of Delegates for their information.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 14 INTRODUCED BY HARDIN COUNTY MEDICAL SOCIETY ON INDIVIDUAL BILLING

Resolution No. 11 of Marshall County speaks to the intent of this Resolution and thus your Reference Committee feels that no action need be taken.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

Respectfully submitted,
J. E. TYRRELL, M.D., *Chairman*
L. J. O'BRIEN, M.D.
T. E. KIERNAN, M.D.
W. D. EDGERTON, M.D.
P. M. CMEYLA, M.D.

BLUE SHIELD

The Blue Shield Reference Committee conducted an open hearing on April 24, 1966, following the first session of the 1966 Iowa Medical Society House of Delegates. Members of the Blue Shield Board, Society members and Mr. William Guy, acting executive director of Iowa Medical Service, were in attendance. The Committee considered Resolution No. 10 as well as Supplemental Report of the Board of Trustees, Part D, Section 1, Exhibit c and Exhibit d.

Section 1, Exhibit d was considered first. The Reference Committee commends the Blue Shield Board for taking steps to correct the weakness in its previous election process. The Committee also commends Blue Shield for providing coverage of those individuals over 65 not electing to participate in Medicare.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee understands the need for Medicare complementary coverage but also recognizes the inherent danger in eliminating deductible and coinsurance features for hospitalized patients while maintaining them when they are treated in private offices. The Blue Shield Board is encouraged to explore policy modifications that would discourage overhospital usage and encourage out-patient and private office practice for diagnosis and therapy.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee approves the amicable solution of a seemingly complex problem concerning Blue Shield payment to pathologists and radiologists for their services on a usual and customary fee basis.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee endorses the action of the

Blue Shield Board of Directors in changing the name of the Blue Chip contract to the Blue Shield comprehensive contract. Your Committee feels that the usual and customary fee concept will work and that local review committees can be counted on to carry out their inherent responsibilities.

Mr. Speaker, I move adoption of this portion of the report.

In reviewing the portion of Exhibit d on ALL OTHER BLUE SHIELD CONTRACTS, the Committee also took cognizance of the Board of Trustees' recommendation regarding the Iowa Relative Value Index. For the sake of continuity they will be considered together. Your Reference Committee recommends that the Iowa Relative Value Index (Green Book) be used *only temporarily* as a standard unit value index effective July 1, 1966, and that this temporary index be revised and updated at the earliest possible time by an appropriate committee of the Iowa Medical Society. It is further recommended that this committee *continue* its updating and revising as necessary. Further, all available information should be utilized, as a guide, including data based on the recent statewide IMS usual and customary fee survey.

Mr. Speaker, I move adoption of this portion of the report.

Your Reference Committee recommends that the House of Delegates grant Blue Shield the flexibility requested, by allowing it to apply a different conversion factor based on the standard unit index for the standard contract to be issued on July 1, 1966. Each dollar of conversion factor is to carry $1,350 in family "service" income ($900 for single subscriber) and ten times that amount in net worth up to a maximum family service income level of $6,000.

Mr. Speaker, I move adoption of this portion of the report.

Each delegate is urged to remind all members of his county medical society that billings to Blue Shield and all other third parties should be on a usual and customary fee basis. This point cannot be stressed too strongly.

Mr. Speaker, I move adoption of this portion of the report.

Your Committee has reviewed proposed changes in the present Blue Shield subscriber contracts and is basically pleased with those changes, for example, increased coverage for unmarried dependent children and th new obstetrical waiting period.

Mr. Speaker, I move adoption of this portion of the report.

In reviewing Resolution No. 10 introduced by Scott County Medical Society, the following comments are appropriate. Of the recommendations regarding Blue Shield made by the House of Delegates in 1965, one recommendation "That the Iowa Relative Value Index, in all of its editions, be replaced with county usual and customary fee ranges as soon as and wherever possible in new and existing Blue Shield contracts," has not been fully carried out. In fact, the Iowa Relative Value Index has just been recommended as the temporary basis for determining fees under service income level contracts up to a maximum of $6,000. This is an emergency measure in order to assist Blue Shield in updating and reissuing its existing contracts by July 1, 1966. Philosophically, the Reference Committee agrees with this resolution and feels that new and existing Blue Shield contracts should utilize the usual and customary fee concept as soon as and whenever possible. Market conditions and other factors prevent immediate adoption of this resolution. Because progress has been made in implementing the usual and customary fee in relation to radiology and pathology and in the new Blue Shield comprehensive plan, the Reference Committee believes, that given time, the entire Blue Shield program can be on a usual and customary fee basis. Therefore, your Reference Committee recommends that the IMS Board of Trustees submit a report to the House of Delegates in one year as to progress made in converting all Blue Shield contracts to a usual and customary fee basis.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee reviewed the Supplemental Report of the Board of Trustees, Part D, Section 1 and in particular the recommendations of the 1965 House of Delegates. The Reference Committee is extremely pleased with the progress that has been made in implementing the appropriate 1965 recommendations and feels assured that this progress was made possible by the close relations between the Board of Trustees and officials of Blue Shield. The Reference Committee feels it is essential that this liaison continue on a regularly scheduled basis.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

It is refreshing to note that the reports of the Board of Trustees and Blue Shield, as well as the deliberations before the Reference Committee, were all on a positive note. The Reference Committee wishes to express particular thanks to the IMS Board of Trustees, Mr. Donald L. Taylor, executive vice-president of the Iowa Medical Society, the Blue Shield Board of Directors, its chairman, Dr. George Scanlon, and Mr. William Guy, acting executive director of Blue Shield for making possible the many positive changes in Blue Shield which have made our task as a Reference Committee a most pleasant one.

Respectfully submitted,
ERLING LARSON, M.D., *Chairman*
CRAIG ELLYSON, M.D.
H. L. SKINNER, M.D.
JOHN SEAR, M.D.

REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in open session with members of the Board of Trustees, IMS staff and interested delegates. Your committee considered Resolution No. 1, as well as Supplemental Reports, Part A and Part B.

RESOLUTION NO. 1—INTRODUCED BY BLACK HAWK COUNTY MEDICAL SOCIETY REGARDING THE JOURNAL OF THE IOWA MEDICAL SOCIETY

It is the recommendation of the Reports of Officers Reference Committee that the JOURNAL OF THE IOWA MEDICAL SOCIETY be retained, and that a continued effort be made to improve it, for the following reasons:

1. The JOURNAL is the most important channel of communication between the Iowa Medical Society and the doctors throughout the state.
2. The JOURNAL is the most important channel of

communication between the doctors and the various medical educational centers.

3. The cost of the JOURNAL to each member of the Iowa Medical Society is much lower than that amount indicated in the supplementary comments provided at the House of Delegates meeting, because many of the duties performed by the staff of the JOURNAL are essential to the Society, and their salaries would have to be continued even though the JOURNAL were abbreviated or eliminated.

4. In addition, this Committee feels that the IMS should take pride in its JOURNAL, and the prestige that it lends the Society should not be ignored.

Mr. Speaker, I move adoption of this portion of the report.

The Committee heard additional statements suggesting that the JOURNAL could be made more stimulating by encouraging free and lively discussion of controversial issues. The committee recommends that consideration be given to including, on a regular basis, a "Letters to the Editor" column for this purpose, and further recommends that efforts be continued to improve the contents, format and general readability of this publication.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF BOARD OF TRUSTEES —PARTS A AND B

In considering "Part A" of the Supplemental Report of the Board of Trustees, your committee reaffirms that all dealings with third parties in medical-economic matters should be based upon the "usual and customary" fee concept, recognizing the right of physicians to join or abstain from participation in third party agreements as free agents.

Mr. Speaker, I move adoption of this portion of the report.

In reviewing the "usual and customary" fee survey, your Committee agrees with the Board of Trustees that limiting the distribution of the fee data will protect against the establishment of inflexible fee ceilings, not responsive to changing circumstances, and will preserve the concept of individual and customary fees.

However, your Committee feels that clarification is necessary in regard to the statistical data gathered in the survey which is considered classified information and is being retained in the IMS headquarters office. This information can be obtained by the president or secretary of a county medical society on written request. This information may then be made available to individual physicians through the president or secretary of their county medical society, but is not to be copied or disseminated.

Mr. Speaker, I move adoption of this portion of the report.

In regard to the Military Dependents Medical Program, your Committee endorses the principles advocated by the Board of Trustees in applying the "usual and customary" fee concept to all third party contracts.

Mr. Speaker, I move adoption of this portion of the report.

In conclusion, this Committee would like to commend the Board of Trustees for their splendid efforts, on behalf of all the physicians of Iowa, toward making our State Medical Society one of the most enlightened and active medical societies in the United States.

Respectfully submitted,
W. J. ROBB, M.D., *Chairman*
H. H. KERSTEN, M.D.
J. P. TROTZIG, M.D.
C. N. HYATT, M.D.
N. W. IRVING, JR., M.D.

Dr. John Greene, of Polk County, extended an invitation to the Iowa Medical Society to hold its annual meeting in Des Moines, April 28 through May 1, 1968. It was moved and seconded that the invitation be accepted, and the motion was adopted.

The Speaker called attention to the fact that the 1967 annual meeting of the IMS will be held in Des Moines on April 16 through 19.

Dr. C. N. Hyatt, of Wayne County, was then recognized. His remarks were as follows:

"Mr. Speaker and Delegates: We have all grown too fat and too sophisticated. All of us have accumulated a certain amount of wealth. During this time most of us have accumulated some children and grandchildren. Which is more important to leave to them? To me, it is more important to leave them a heritage than it is to leave them an inheritance.

"I have sat in numerous sessions of this House, and I think I know how most of you feel. I know how we resent the intrusions of third-party dictatorship over the practice of medicine. However, while we have been deliberating, Rome has been burning. As a result, in effect, we have merely been playing the fiddle. Do you think that the 'usual and customary fee' will survive very long once the government gains control? I, myself, cannot see it that way.

"It is an old poker adage that 'you either put up or shut up.' The only way we have any hopes of stemming the tide, of preserving any degree of independence, is through the ballot box.

"This is a time for putting in crops, and I am planting $200 in IMPAC, and I am going to watch very closely to see whether anything grows. If it does, I will help to cultivate it. If not, I am going to tend to my own knitting and get what I can while I have a chance."

Dr. Birge moved that the House of Delegates authorize the Board of Trustees to prepare a suitable letter for presentation to Dr. F. G. Ober in recognition of his outstanding service as president of the Iowa Medical Society. The motion was seconded and adopted. Dr. Birge then moved that the House of Delegates approve the actions of the IMS Board of Trustees from the date of the last previous annual meeting. The motion which was worded as follows, was seconded and adopted:

Resolved, That the actions of the Board of Trustees of the Iowa Medical Society from the date of the last annual meeting to date be and they hereby are approved, ratified and confirmed.

The Speaker announced that the organizational meeting of the Board of Trustees would be held immediately following the adjournment of the House of Delegates, and that the organizational meeting of the Judicial Council would occur at that time too. He also reminded the delegates that the installation of the new president of the IMS would occur following the formal adjournment and prior to those other two meetings.

The meeting was adjourned at approximately 10:40 a.m.

FIFTY YEAR CLUB MEMBERS

JUNE 15, 1966

Ash, William E. ..... Council Bluffs

Banton, Oscar H. ..... Charles City
Bartlett, George E. ..... New Sharon
Billingsley, John W. ..... Newton
Blaha, George A. ..... Whitten
Block, Charles E. ..... Davenport
Bowers, Arthur S. ..... Orient
Bowie, Louis L. ..... Zearing
Braunlich, George ..... Davenport
Brereton, Harold L. ..... Emmetsburg
Brinkman, William F. ..... Pocahontas
Bullock, William E. ..... Lake Park
Burbank, Dean S. ..... Pleasantville
Burke, Thomas A. ..... Mason City

Carlile, Amos W. ..... Manning
Carlson, Frank G. ..... Mason City
Chase, William B., Sr. ..... Des Moines
Christensen, John R. ..... Palo Alto, California
Clapsaddle, John G. ..... Burt
Clasen, Henry W. ..... Littleton, Colorado
Closson, Charles L. ..... Walker
Cody, William E. ..... Deerfield Beach, Florida
Cole, Elmer J. ..... Woodbine
Conmey, Roy M. ..... Sergeant Bluff
Connell, John ..... Denver, Colorado
Cooper, Gladys A. ..... Lansing, Michigan
Cretzmeyer, Francis X. ..... Emmetsburg
Crew, Arthur E. ..... Marion
Crow, George B. ..... Burlington
Cusick, George W. ..... Davenport

Decker, Jay C. ..... Sioux City
Doane, Grace O. ..... Des Moines
Downing, Leroy M. ..... Cedar Rapids
Dyson, James E. ..... Phoenix, Arizona

Egermayer, George W. ..... Elliott
Ennis, Harry H. ..... Iowa City

Farlow, Charles T. ..... Farnhamville
Fillenwarth, Floyd H. ..... Charles City
Fordyce, Frank W. ..... Des Moines

Gearhart, George W. ..... Springville
Gernsey, Merritt ..... Long Beach, California
Gillett, Francis A. ..... Oskaloosa
Gittins, T. Roy ..... Sioux City
Goggin, John G. ..... Ossian
Grubb, Merrill W. ..... Galva
Gutch, Roy C. ..... Chariton

Hamilton, Benjamin F. ..... Jefferson
Hansen, Robert R. ..... Marshalltown
Harken, Conreid R. ..... Osceola
Harris, Ray R. ..... Dubuque
Henkin, John H. ..... Sioux City
Heusinkveld, Henry J. ..... Clinton
Hickman, Charles S. ..... Centerville
Hill, Julia Ford ..... Grinnell
Hoffman, Paul M. ..... West Branch
Hollis, Edward L. ..... Marengo
Hopkins, David H. ..... Des Moines
Houser, Cass T. ..... Cedar Rapids
Housholder, Harold A. ..... Winthrop
Hudek, Joseph W. ..... Garnavillo
Huston, D. Ferrel ..... Burlington

Jenkinson, Harry R. ..... Iowa City
Johann, Albert E. ..... Des Moines
Johnson, Amos E. ..... Florence, Nebraska
Jones, Harry J. ..... Cedar Rapids
Joynt, Albert J. ..... Waterloo

Keech, Roy F. ..... Cedar Rapids
Keeney, George H. ..... Mallard
Kennedy, Elizabeth Smith ..... Oelwein
Kern, Lester C. ..... Waverly
Kershner, Frank O. ..... Clinton
Keyser, Ralph E. ..... Marshalltown
Kiesling, Harry F. ..... Lehigh
Kimball, John E. ..... West Liberty
Kleinberg, Henry E. ..... Des Moines
Kyle, William S. ..... Washington

Larson, Andrew G. ..... Dickens

McCaffrey, Eugene H. ..... Des Moines
McClean, Earl D. ..... Des Moines
McCreight, George C. ..... Carmel Valley, California
McHugh, Charles P. ..... Sioux City
McVay, Melvin J. ..... Lake City
Magee, Emery E. ..... Cedar Falls
Maplethorpe, Charles W., Sr. ..... Toledo
Matthey, Walter A. ..... Bettendorf
Maxwell, Charles T. ..... Sioux City
May, George A. ..... Forest Grove, Oregon
Meyers, Frank W. ..... Dubuque
Miller, Enos D. ..... Wellman
Mitchell, Claire H. ..... Cincinnati
Murray, Frederick G. ..... Ames

Neal, Emma J. ..... Cedar Rapids
Neuzil, William J. ..... Cedar Rapids
Noble, Nelle S. ..... Des Moines

O'Brien, Stephen A. ..... Mason City

Palmer, Carson W. ..... Guttenberg
Parker, Robert L. ..... Des Moines

Rankin, William ..... Keokuk
Reeder, James E., Sr. ..... San Diego, California
Rohrbacher, William M. ..... Iowa City
Rose, Alvin A. ..... Story City
Rowley, William G. ..... Sioux City
Royal, Malcolm A. ..... Des Moines
Ruth, Verl A. ..... Des Moines

Saar, Jesse L. ..... Donnellson
Sanders, George ..... Coral Gables, Florida
Schnug, George E. ..... Dows
Senska, Frank ..... Iowa City
Senty, Elmer G. ..... Davenport

Severson, George J. ..... Slater
Simons, Ralph R. ..... Bloomfield, Connecticut
Snyder, Raleigh R. ..... Des Moines
Starr, Charles ..... Mason City
Stepp, James K. ..... Manchester
Strawn, John T. ..... Vinton

Taylor, Robert S. ..... Davenport
Teufel, John C. ..... Davenport
Thomas, Clyde E. ..... Croton-on-Hudson, New York
Thomas, Colin G. ..... Monticello
Thompson, Howard E. ..... Dubuque
Thornton, John W. ..... Lansing
Traister, John E. ..... Eddyville
Trey, Bernard L. ..... Marshalltown

Van Metre, Paul W. ..... Rockwell City
Victorine, Edward M. ..... Cedar Rapids
Vineyard, Thomas L. ..... Ottumwa

Walker, Thomas S. ..... Riceville
Ward, Loraine W. ..... Oelwein
Weingart, Julius S. ..... Des Moines
Weston, Robert A. ..... Des Moines
Whitaker, Ben T. ..... Boone
Wilcox, Edgar B. ..... Oskaloosa
Wurtzer, Ezra L. ..... Clear Lake

Yocom, Albert L. ..... Chariton
Young, Howard O. ..... Cedar Rapids

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Buchanan	R. J. Moore, Independence	P. H. Tenney, Independence	P. J. Leehey, Independence
Buena Vista	R. P. Noble, Alta	J. A. Cornish, Storm Lake	R. R. Hansen, Storm Lake
Butler	D. M. Everson, Shell Rock	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	D. C. Carver, Rockwell City	J. W. DeGroote, Lake City	G. S. Rost, Lake City
Carroll	J. R. Martin, Carroll	A. D. Anneberg, Carroll	J. M. Tierney, Carroll
Cass	D. E. Wilcox, Atlantic	R. D. Harris, Anita	E. M. Juel, Atlantic
Cedar	G. H. Utley, Clarence	O. E. Kruse, Tipton	O. E. Kruse, Tipton
Cerro Gordo	J. S. Westly, Mason City	W. V. Wulfekuhler, Mason City	H. G. Marinos, Mason City
Cherokee	H. J. Fishman, Cherokee	M. D. Hayden, Cherokee	H. J. Fishman, Cherokee
Chickasaw	D. R. Olsen, New Hampton	A. F. Benetti, New Hampton	
Clarke	G. B. Bristow, Osceola	E. E. Lauvstad, Osceola	G. B. Bristow, Osceola
Clay	E. E. Munger, Spencer	Eunice M. Christensen, Spencer	G. F. Fieselmann, Spencer
Clayton	C. C. Smith, McGregor	D. W. Pfeiffer, McGregor	P. R. V. Hommel, Elkader
Clinton	G. A. Chalian, Clinton	G. D. Aurand, Clinton	M. E. Barrent, Clinton
Crawford	J. L. Flood, Denison	J. M. Hennessey, Manilla	C. H. Fee, Denison
Dallas-Guthrie	D. W. Todd, Guthrie Center	R. J. Peterson, Panora	A. G. Felter, Van Meter (D) W. A. Seidler, Jamaica (G)
Davis	H. M. Perry, Bloomfield	P. T. Meyers, Bloomfield	P. T. Meyers, Bloomfield
Decatur-Ringgold	L. N. Spohnheimer, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni (D) D. E. Mitchell, Mount Ayr (R)
Delaware	R. E. Clark, Manchester	J. D. Compton, Edgewood	J. E. Tyrrell, Manchester
Des Moines	J. L. Saar, Jr., Burlington	H. B. Tjaden, Burlington	R. B. Allen, Burlington
Dickinson	R. J. Coble, Lake Park	E. L. Johnson, Spirit Lake	E. L. Johnson, Spirit Lake
Dubuque	L. P. Alt, Dubuque	C. M. Strand, Dubuque	R. J. McNamara, Dubuque
Emmet	D. E. Wolters, Estherville	C. V. Lindholm, Armstrong	R. L. Cox, Estherville
Fayette	A. E. Berry, Oelwein	J. P. Gallagher, Oelwein	A. F. Grandinetti, Oelwein
Floyd	R. M. Nielsen, Charles City		E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	D. K. Benge, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	K. D. Rodabaugh, Tabor
Greene	G. F. Canady, Jefferson	A. A. Knosp, Jefferson	E. D. Thompson, Jefferson
Grundy	G. D. Button, Conrad	J. R. Scott, Grundy Center	J. E. Rose, Grundy Center
Hamilton	B. F. Howar, Webster City	E. F. Brown, Webster City	G. A. Paschal, Webster City
Hancock-Winnebago	D. H. Brown, Forest City	S. M. Haugland, Lake Mills	J. R. Camp, Britt
Hardin	H. O. Stoutland, Ackley	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	Joseph Petrikonis, Woodbine	R. G. Wilson, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	H. M. Readinger, New London	C. W. Toland, Mount Pleasant	J. S. Jackson, Mount Pleasant
Howard	D. O. Maland, Cresco	R. G. Boeke, Cresco	P. A. Nierling, Cresco
Humboldt	Beryl Michaelson, Dakota City	M. L. Northup, Humboldt	I. T. Schultz, Humboldt
Ida	J. W. Martin, Holstein	J. B. Dressler, Ida Grove	J. W. Martin, Holstein
Iowa	R. L. Sauer, Marengo	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	O. L. Frank, Maquoketa	P. F. Brown, Maquoketa	F. J. Swift, Jr., Maquoketa
Jasper	D. R. Onnen, Newton	P. J. Cusack, Newton	J. W. Ferguson, Newton
Jefferson	G. E. Egli, Fairfield	W. C. Bauman, Fairfield	J. W. Castell, Fairfield
Johnson	S. E. Ziffren, Iowa City	G. R. Zimmerman, Iowa City	G. W. Howe, Iowa City
Jones	O. E. Senft, Monticello	J. J. Randolph, Monticello	L. D. Caraway, Monticello
Keokuk	K. L. McGuire, Keota	R. G. Gillett, Sigourney	E. R. Gann, Sigourney
Kossuth	J. J. Lesiak, Titonka	R. E. Jongewaard, Wesley	M. G. Bourne, Algona
Lee	M. H. Archibald, Fort Madison	Sebastian Ambery, Keokuk	G. H. Ashline, Keokuk G. C. McGinnis, Fort Madison
Linn	S. M. Lehr, Cedar Rapids	J. D. Schuchmann, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	E. S. Groben, Columbus Junction	L. E. Weber, Jr., Wapello	E. S. Groben, Columbus Junction
Lucas	Dean Curtis, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	J. G. Lavender, George	S. H. Cook, Rock Rapids	A. C. Wubbena, Rock Rapids
Madison	R. W. Carson, Winterset	E. G. Rozeboom, Winterset	J. E. Evans, Winterset
Mahaska	S. A. Smith, Oskaloosa	D. K. Campbell, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	C. R. Burroughs, Knoxville	A. D. Patterson, Knoxville	G. K. Van Zee, Pella
Marshall	R. H. Watt, Marshalltown	R. G. German, Marshalltown	R. C. Carpenter, Marshalltown
Mills	M. L. Scheffel, Malvern	R. K. Fryzek, Glenwood	M. L. Scheffel, Malvern
Mitchell	R. J. Smith, Stacyville	L. K. Lackore, St. Ansgar	T. E. Blong, Stacyville
Monona	L. A. Gaukel, Onawa	W. P. Garred, Onawa	L. A. Gaukel, Onawa
Monroe	H. J. Richter, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	S. R. Smith, Red Oak	H. C. Bastron, Red Oak	H. C. Bastron, Red Oak
Muscatine	R. E. Olson, Muscatine	K. E. Wilcox, Muscatine	K. E. Wilcox, Muscatine
O'Brien	L. J. Sweeney, Sanborn	A. D. Smith, Primghar	E. B. Getty, Primghar
Osceola	F. B. O'Leary, Sibley	T. J. Carroll, Sibley	T. J. Carroll, Sibley
Page	F. S. Sperry, Clarinda	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto	C. C. Moore, Emmetsburg	F. S. Conway, Emmetsburg	J. L. Coffey, Emmetsburg
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Polk	R. B. Stickler, Des Moines	J. H. Dickens, Des Moines	C. A. Trueblood, Indianola
Pottawattamie	F. E. Marsh, Jr., Council Bluffs	M. W. Kinney, Council Bluffs	G. H. Pester, Council Bluffs
Poweshiek	H. R. Light, Grinnell	J. H. Ransom, Grinnell	S. D. Porter, Grinnell
Sac	C. D. Gibson, Sac City	R. H. Miller, Sac City	J. W. Gauger, Early
Scott	W. S. Pheteplace, Davenport	K. H. McKay, Davenport	Erling Larson, Davenport
Shelby	L. V. Larsen, Harlan	C. V. Bisgard, Harlan	J. H. Spearing, Harlan
Sioux	C. B. Murphy, Alton	T. E. Kiernan, Sioux Center	M. O. Larson, Hawarden
Story	W. C. McCormack, Ames	R. R. Sprowell, Ames	J. D. Conner, Nevada
Tama	R. W. Linthacum, Dysart	A. J. Havlik, Tama	A. J. Havlik, Tama
Union-Taylor	R. H. Kuhl, Creston	W. A. Fisher, Creston	D. L. York, Creston (U) R. W. Boulden, Lenox (T)
Van Buren	K. Furumoto, Keosauqua	J. T. Worrell, Keosauqua	K. Furumoto, Keosauqua
Wapello	L. E. Coppoc, Ottumwa	R. P. Meyers, Ottumwa	L. J. Gugle, Ottumwa
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Washington	E. J. Vosika, Washington	G. E. Montgomery, Washington	G. E. Montgomery, Washington
Wayne	K. A. Garber, Corydon	C. N. Hyatt, Corydon	C. N. Hyatt, Corydon
Webster	R. E. Drown, Fort Dodge	J. E. Reed, Fort Dodge	C. J. Baker, Fort Dodge
Winneshiek	F. F. Nelson, Decorah	T. F. Dynes, Decorah	E. F. Hagen, Decorah
Woodbury	H. E. Rudersdorf, Sioux City	C. T. Helseth, Sioux City	C. M. Marriott, Sioux City
Worth	B. H. Osten, Northwood	M. P. Allison, Northwood	
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when President Washington signed the first U.S. patent law. For patents mean drug progress. For example, of the 604 important drugs introduced worldwide since 1941, the majority originated in the U.S. drug industry. By contrast, a major west European nation, which has no patent protection, contributed one.

How great is the contribution of drug patents? The answer is told in life itself: our children live 10 years longer than we, and need not suffer polio, measles, diphtheria, tuberculosis, rheumatic heart disease, and a dozen other illnesses we grew up fearing. We can expect these benefits to multiply—as long as our patent system remains strong.

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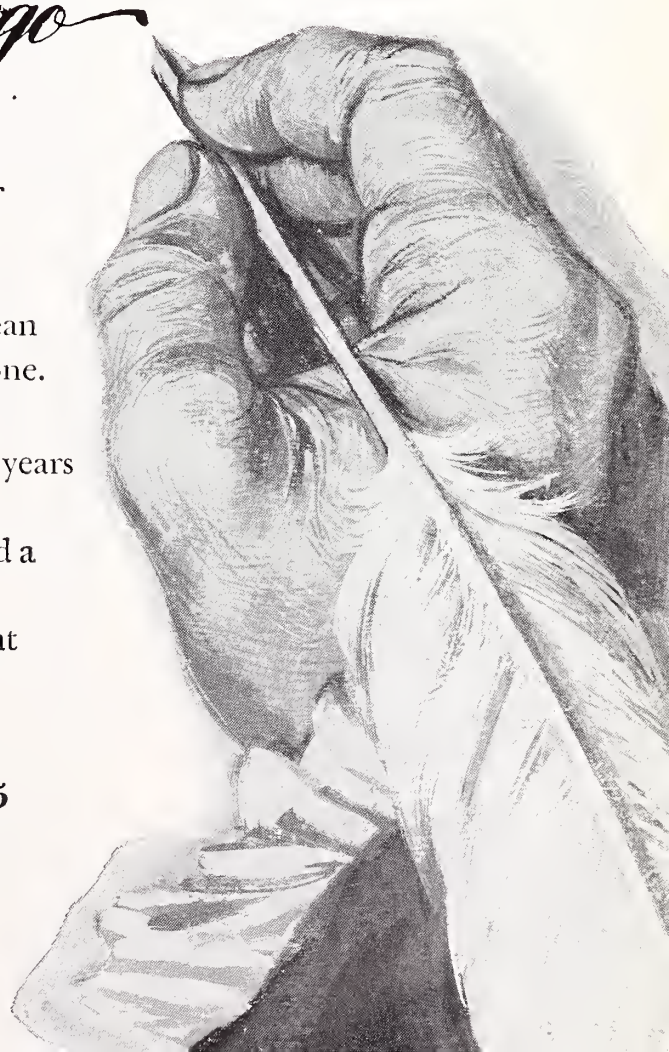

Coming Meetings

CONTINENTAL U. S.

July 6-9	**Idaho State Medical Association,** The Lodge, Sun Valley.
July 10-13	**Conference on Medicine and Religion, University of California Extension,** Lake Arrowhead.
July 10-15	**43rd Annual Conference, American Physical Therapy Association,** Biltmore Hotel, Los Angeles.
July 11-14	**Postgraduate Course in Ophthalmology, University of Colorado School of Medicine,** Estes Park.
July 15-17	**Rocky Mountain Cancer Conference,** Brown Palace-West Hotel, Denver.
July 18-23	**12th Annual Postgraduate Course for the General Practitioner, University of Colorado School of Medicine,** Denver.
July 20-22	**Biannual Radiologic-Orthopedic Seminar of Montana,** Glacier Park Lodge, East Glacier.
July 25-28	**9th Annual Ruidoso Summer Clinic, New Mexico Chapter of American Academy of General Practitioners, Chaparral Motel,** Ruidoso.
July 25-29	**Interpretation and Therapy of Cardiac Arrhythmias, Hahnemann Medical College and Hospital,** Marriott Motor Hotel, Philadelphia.
July 27-29	**Postgraduate Course in Dermatology, University of Colorado School of Medicine,** Aspen.
Aug. 1-5	**Postgraduate Course in Pediatrics, University of Colorado School of Medicine,** The Stanley Hotel, Estes Park.
Aug. 5-6	**Black Hills Fall Seminar,** Surbeck Student Center, South Dakota School of Mines and Technology, Rapid City.
Aug. 8-12	**71st Annual Session, National Medical Association,** Pick-Congress Hotel, Chicago.
Aug. 8-12	**Postgraduate Course in Internal Medicine, University of Colorado School of Medicine,** Estes Park.
Aug. 12-13	**National Conference on Infant Mortality, sponsored by the AMA Committee on Maternal and Child Care,** Fairmont Hotel, San Francisco.
Aug. 12-14	**International Doctors in Alcoholics Anonymous,** Speedway Motel, Indianapolis.
Aug. 18-20	**Rocky Mountain Radiological Society,** Brown Palace Hotel, Denver.
Aug. 24-26	**13th Western Cardiac Conference, University of Colorado Medical Center,** Denver.
Aug. 25-27	**University of Wisconsin Cancer Conference,** "New and Old Approaches to Therapy of Advanced Cancer," University of Wisconsin, Madison.
Aug. 25-27	**West Virginia State Medical Association,** The Greenbrier, White Sulphur Springs.
Aug. 28-Sept. 2	**American Academy of Physical Medicine and Rehabilitation,** Sheraton Palace Hotel, San Francisco.
Aug. 30-Sept. 2	**Wyoming State Medical Society,** Lake Lodge, Moran.

ABROAD

Sept. 7-10	**9th International Congress of Internal Medicine of the International Society of Internal Medicine,** Amsterdam.

Methodist Hospital Internal Medicine Symposium

The Thirteenth Annual Internal Medicine Symposium, sponsored by the Section of Internal Medicine of Iowa Methodist Hospital, will be held September 10, 1966, in Des Moines. The meeting will be held in the Ralph L. Jester Auditorium of the Iowa Methodist School of Nursing. The general topic of the meeting will be "Coronary Artery Disease."

Guest speakers are as follows:

"Drugs and the Coronary Circulation"—Steven M. Horvath, Ph.D., director and professor, Institute of Environmental Stress, University of California, Santa Barbara, California

"Radiographic Techniques in the Diagnosis of Coronary Artery Disease"—Erich K. Lang, M.D., Department of Radiology, Methodist Hospital, Indianapolis, Indiana

"Surgical Horizons in the Treatment of Coronary Artery Disease"—C. Walton Lillehei, M.D., professor of surgery, University of Minnesota, Minneapolis, Minnesota

"Stress and Cardiac Work Capacity"—Donald L. Warkentin, M.D., assistant professor, Department of Internal Medicine, University of Iowa

There will be no registration fee for this meeting.

For further information, write either to Lawrence F. Staples, M.D. or James E. Kelsey, M.D., Iowa Methodist Hospital, Des Moines.

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The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

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Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

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Before prescribing, consult package circular.

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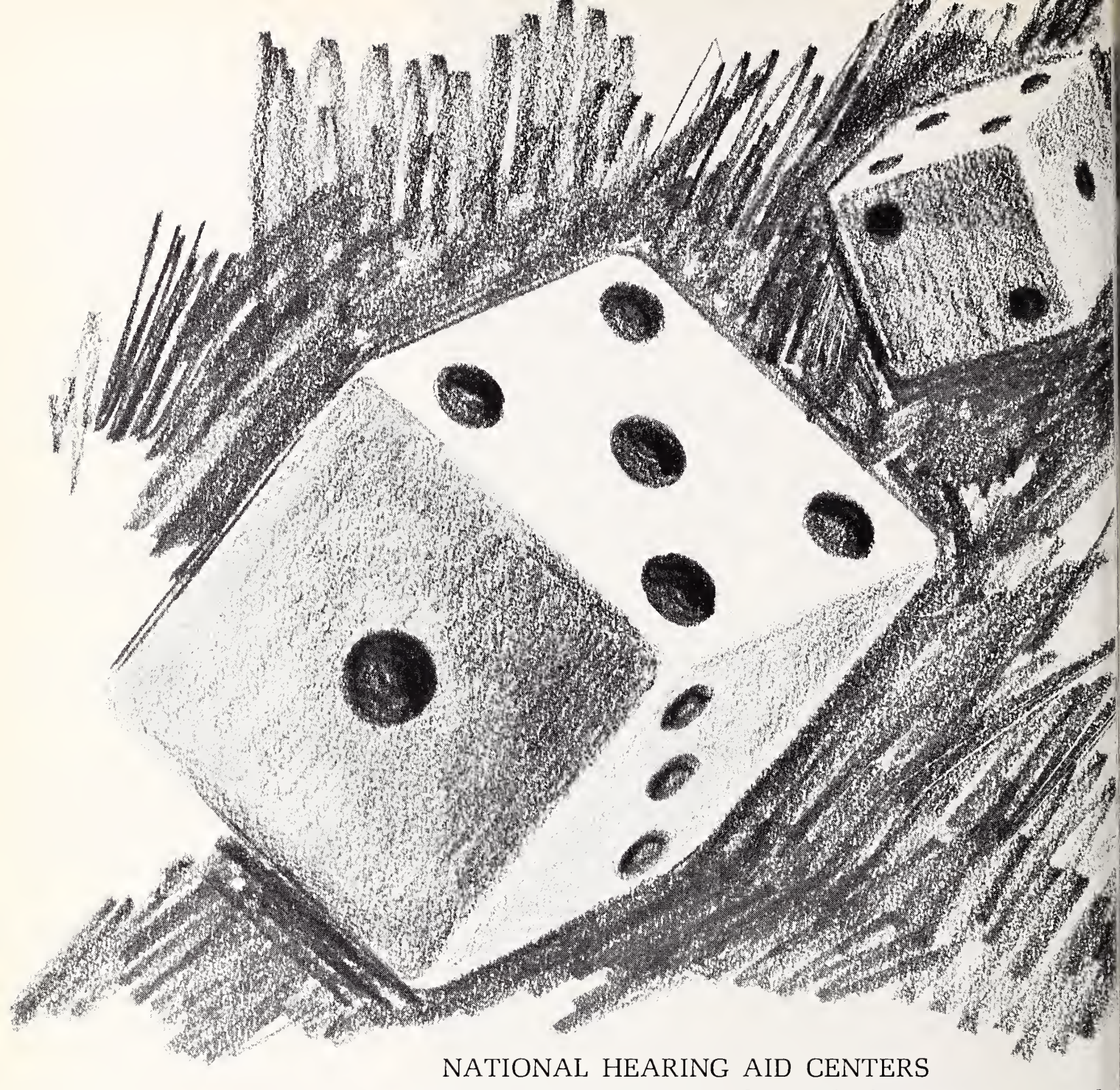

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Personals

Dr. Walter M. Block, a pediatrician who is medical director of the Child Evaluation Clinic of Cedar Rapids, addressed a dinner meeting of the Cedar Rapids area chapter of the American Institute of Industrial Engineers, at the Ox Yoke Inn, in Amana, on May 17. His topic was "Why Johnny Is Ornery." Also in May, Dr. Block gave the keynot address at the annual meeting of the Linn County Mental Health Association, at the Roosevelt Hotel in Cedar Rapids.

At the May meeting of District I of the Iowa Nurses Association, held in St. Joseph Mercy Hospital, Sioux City, the principal speaker was **Dr. Dwayne E. Howard**, of Sioux City. He spoke on "Nursing Problems in Urology."

Dr. William A. Baird, an Ames orthopedist, was the physician recipient of a Cotton Memorial Award from the Iowa Chapter of the Arthritis Foundation, at the organization's annual awards dinner in Des Moines on May 11. The recognitions are given in memory of **Mr. Paul Cotton,** a Des Moines newspaperman, who was the Iowa Chapter's first secretary. The layman honored this year is **Mr. Howard Reppert, Jr.**, a Des Moines businessman who has served for at least two terms in the State Legislature. **Dr. Merlin P. Strottman**, an assistant professor of internal medicine and of rehabilitation at the U. of I. College of Medicine, was given the Chapter's distinguished service award.

Dr. Campbell F. Watts was chosen president-elect of the Linn County Medical Society; **Dr. Stanley T. Moen** was named vice-president; **Dr. John D. Schuchmann** was made secretary; and **Dr. H. R. Hirleman** was chosen as treasurer. **Dr. S. M. Lehr** succeeded to the presidency at the annual business meeting held in mid-May. All of them practice in Cedar Rapids.

An item in the May 7 issue of the ESTHERVILLE NEWS said that a Sioux Falls psychiatrist has agreed to move to Estherville. He is **Dr. Henry E. Davidson**, a diplomate of the American Board of Psychiatry.

Dr. Samuel D. Porter, a son of **Dr. and Mrs. S. D. Porter**, of Grinnell, has been awarded a $3,600 clinical fellowship at the U. of I. College of Medicine. The younger Dr. Porter is a 1956 graduate of Grinnell College, he interned at University Hospitals, Iowa City, and subsequently he served in the Army for two years. Currently he is a second-year resident in surgery.

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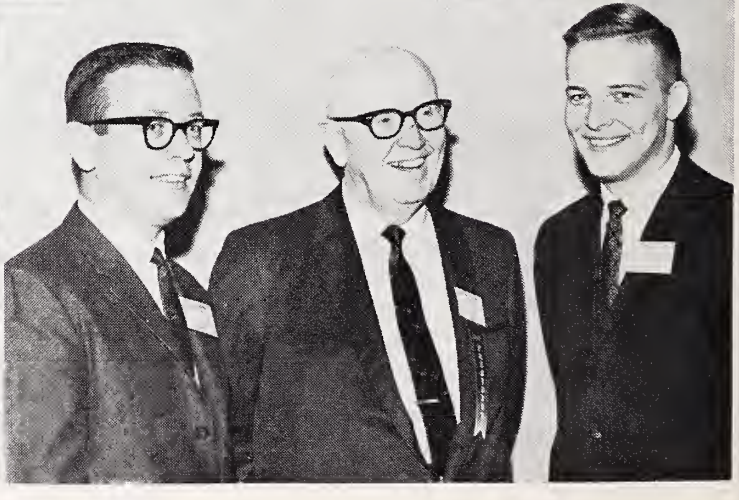
SCENES FROM 1966 IMS ANNUAL MEETING

This page: Upper left. C. W. Seibert, M.D., chairman of the IMS Board of Trustees, right, presents an AMA/ERF check to Dean Robert Hardin, M.D., University of Iowa College of Medicine. **Upper middle left.** Two Annual Meeting speakers were Milton Helpern, M.D., chief medical examiner, New York City, left, and James Hagerty, former presidential press secretary and presently a network broadcasting executive. **Lower middle left** photo shows new officers, left to right, S. P Leinbach, M.D., president; R. F. Birge, M.D., president-elect; K. K. Hazlet, M.D., vice-president; and V. L. Schlaser, M.D., secretary. **Middle right.** Past-presidents of the IMS pause for a picture. **Lower left.** F. G. Ober, M.D., retiring IMS president; P. M. Kersten, M.D., speaker of the House, and R. F. Birge, M.D., president-elect. **Lower right.** University of Iowa medical students Paul Gjerstad and Jerry Jochims flank G. H. Scanlon, M.D., president of the Iowa Medical Foundation.

Adjacent page: Upper left. D. C. Wirtz, M.D., the 1966 Annual Meeting program chairman, addresses a general session. **Upper right.** Representatives of the Iowa Association of Medical Assistants provide coffee for members of IMS House of Delegates. **Upper middle, center and right.** F. G. Ober, delivers presidential remarks, and Delegate T. E. Shea, M.D., casts his ballot. **Middle left.** Four members of the Reference Committee on Legislation and Medical Service: T. E. Kiernan, M.D., W. D. Edgerton, M.D., L. J. O'Brien, M.D., and J. E. Tyrrell, M.D., P. M. Cmeyla, M.D. is not pictured. Participants in the Medical-Legal Symposium were, from the left, R. C. Morris, LL.B., Cleveland; R. B. Murphy, LL.B., Madison; F. C. Coleman, M.D., Tampa; and R. B. Throckmorton, LL.M., Des Moines. **Lower left.** S. P. Leinbach, M.D., presents a past-president's pin to F. G. Ober, M.D. **Lower right.** Election tellers were past-presidents G. H. Scanlon, M.D., O. D. Wolfe, M.D., and J. W. Billingsley, M.D.



SOCIETY
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BALLOT BOX

When he was asked to comment on an invitation for the Des Moines College of Osteopathic Medicine and Surgery to move to Fort Worth, **Dr. Robert Stickler**, president of the Polk County Medical Society told a DES MOINES REGISTER reporter: "I don't think the move will influence the care of patients, except that other facilities must absorb some charitable functions. The present osteopathic physicians will continue to practice at the other osteopathic hospitals. I feel that maintaining a school here is beyond their expectations, when you consider that it costs $10 million a year to run the medical school at the University of Iowa. I don't think the state and community can afford that."

Dr. A. W. Horsley, of Sioux City, was elected president of the Woodbury County Heart Association, in May.

A five-year effort by **Dr. Alson E. Braley,** head of ophthalmology at the U. of I. College of Medicine and of the Iowa Lions Sight Conservation Foundation, culminated on May 11 with the dedication of a new $150,000 eye-research unit at University Hospitals, Iowa City. The project is especially noteworthy in that it was accomplished entirely with private funds. Some of the money had been invested for nearly four years in the Iowa Development Fund.

The 22-room addition contains approximately 7,000 square feet of floor space, and nearly doubles the area available to the Ophthalmology Department. Areas are provided for glaucoma research, for measuring electrical impulses in the visual system, for research in external-eye diseases and for eye photography. Other facilities provided for include a nurses' station, a medical records room, a conference room-library, refracting lanes, a retina-detachment examining room, and a storeroom.

Dr. R. J. Ferlic, of Carroll, has accepted a residency in physical medicine and rehabilitation at a Veterans Administration hospital in Chicago. **Mrs. Ferlic** and a son, **Tom,** who will be a senior at Kuemper High School next year, are remaining in Carroll.

A group of between five and 12 faculty members at the U. of I. College of Medicine meet each Thursday noon for lunch and for discussions of theology. **Dr. Hal B. Richerson,** an instructor in internal medicine, told a reporter for the IOWAN that the meetings began three years ago, when a faculty member who was incurably ill became concerned about the relationship between the physician and the patient who knows that he is dying. More recently, the group has been discussing theological books. The participants have studied the writings of the late **Paul Tillich,** which are on the borderline between psychiatry and religion. Presently, they are examining THE SECULAR CITY, by **Harvey Cox.**

Dr. J. W. Standeven, who formerly practiced medicine in Oakland, Iowa, has been made a full member of the American College of Hospital Administrators. He is now the director of the Veterans Administration Hospital in Brecksville, Ohio.

A study, conducted by the Illinois State Medical Society, of the blood of persons killed in auto crashes in that state during the first three months of 1966, has shown that half of them had been drinking. Half of that half had been intoxicated according to the legal definition.

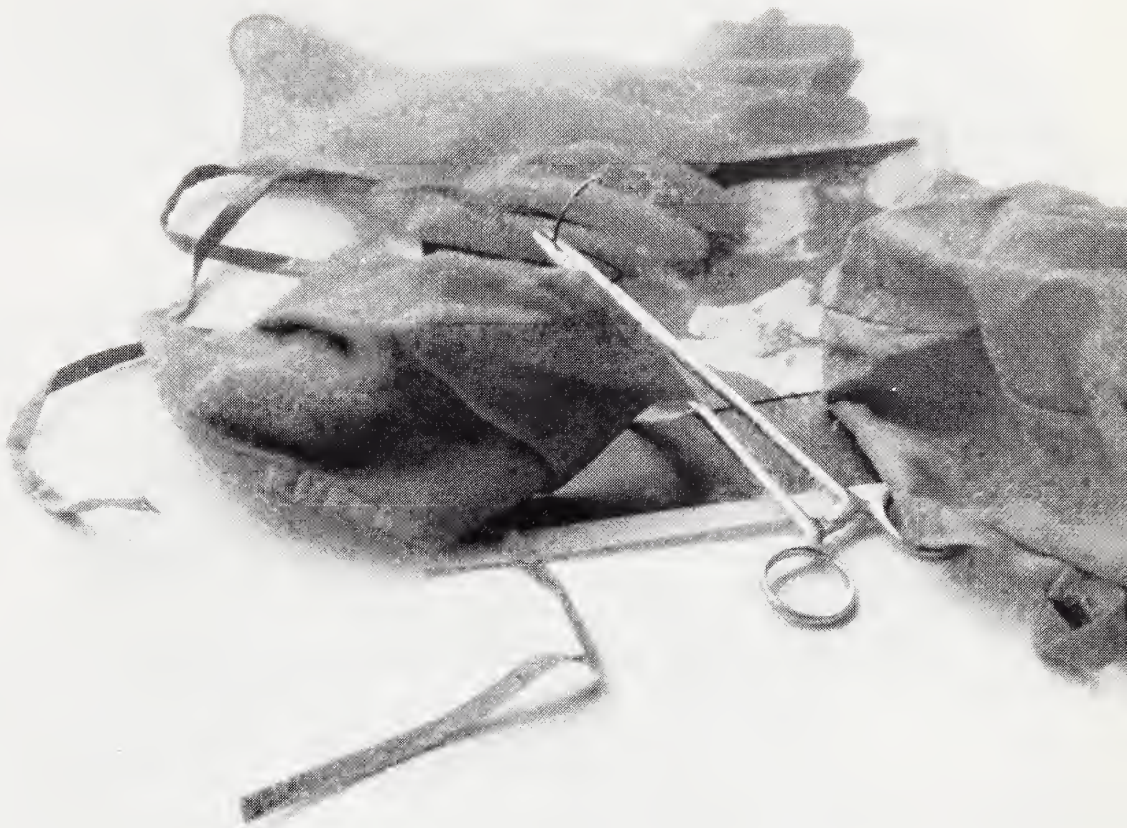
Dr. J. Lawrence Smith, an Ames surgeon, announced in May that he would leave there on about June 15 to join a surgical group in Tacoma, Washington. Dr. Smith moved to Ames from Iowa Falls about 5½ years ago.

Dr. C. R. Roberts, of Dysart, underwent surgery at Methodist Hospital, Rochester, Minnesota, on May 10. **Dr. R. W. Linthacum** had planned to quit practice in Dysart on June 1, but because of Dr. Roberts' illness he has postponed his move to California so that the townspeople may continue to have medical care.

Dr. Gerald Solomons, director of the child development clinic at the U. of I. College of Medicine, spoke on the subject "Importance of Communication" at a meeting in the St. Edmond High School auditorium, in Fort Dodge on May 19, under the sponsorship of the Webster County Association for Retarded Children.

Dr. Craig Champion, who returned to the Osage Clinic recently after a tour of duty in the Navy, will begin a residency in internal medicine at the U. of I. College of Medicine on July 1.

In consequence of a disagreement over fees, **Dr. Rudolf A. Selo,** of Council Bluffs, resigned from his post as Pottawattamie County medical examiner. At a meeting held the next evening, the Pottawattamie County Medical Society endorsed Dr. Selo's attitude and action.



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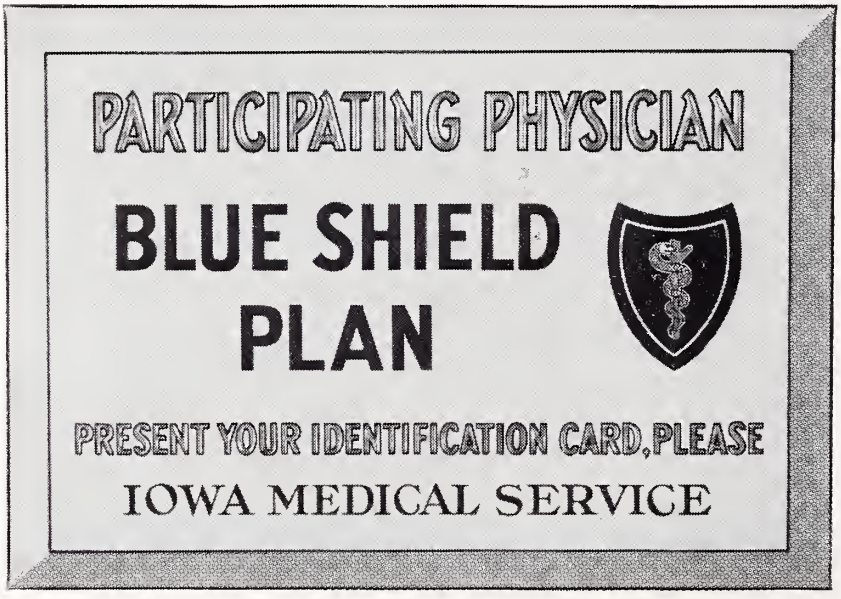

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At the annual meeting of the Iowa Heart Association, in May, **Dr. Walter M. Kirkendall,** a professor of internal medicine at the U. of I., succeeded to the presidency, and **Dr. Alfred J. Herlitzka,** of Mason City, was chosen as president-elect. **Dr. Verl Hunt,** of Marshalltown, was named first vice-president, and **Dr. E. A. Motto,** of Davenport, second vice-president.

Dr. G. F. Brown bought a new delivery table for the obstetrics area of the new hospital at Anamosa.

Dr. Charles D. Hintz and **Dr. Richard E. Preston,** Des Moines psychiatrists, participated in a mental health seminar for business and industrial executives in Des Moines on May 24 and 25. It was sponsored by Drake University's Center for Continuing Education and the Polk County Association for Mental Health, Inc.

Dr. C. P. Hawkins, of Clarion, spoke to the Newcomers' Club, a women's group in Clarion, April 27, on "How to Become a Widow."

A panel consisting of **Drs. James W. Chambers, Alexander Ervanian, Robert W. Hoffman, Clysta Richard** and **Louis L. Maher** answered questions on cancer in a program on KDPS-TV, the television station of the Des Moines Public Schools, from 9 to 10 p.m. on May 12.

Dr. Samuel P. Leinbach, of Belmond, president of the Iowa Medical Society, moderated a session of a symposium on rabies sponsored by the USPHS, the AMA and the American Veterinary Medical Association, in Atlanta early in May. He was one of the discussants in another of the sessions.

On May 10, **Dr. William S. Armstrong,** of Marion, addressed the third session of a Forum on Social Concerns sponsored by eight churches and several civic and school organizations there. His topic was "Pornography." Dr. Armstrong became a physician after starting his college education in journalism and radio, and is a member of the Linn County School Board. **Dr. William Bennett** spoke on "Narcotics" at the final session, May 25.

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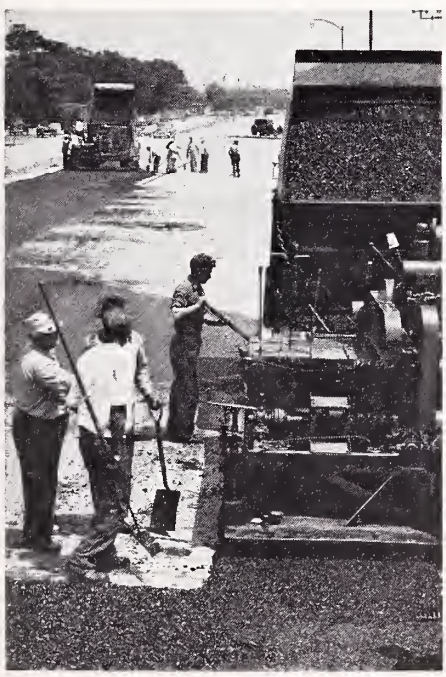

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References: (1) Schoch, A. G.: Current News in Dermatology, August, 1963; (2) Jillson, O. F., and Baughman, R. D.: Arch. Dermat. 88:409, 1963; (3) Cole, H. N., et al.: J.A.M.A. 130: 1, 1946; (4) MacEachern, W. N., and Jillson, O. F.: Arch. Dermat. 89: 147, 1964.

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A reception was held for **Dr. Harold L. Brereton,** on May 8, at the First Congregational Church in Emmetsburg, in recognition of his more than 50 years' practice of medicine in the community.

Mr. Robert B. Throckmorton, of Des Moines, attorney for the Iowa Medical Society and until recently general counsel to the American Medical Association, was the guest speaker at a meeting of lawyers, physicians and dentists, and their wives, in Algona on May 4. The Kossuth County Bar Association was the host organization.

The State Board of Health, on May 11, gave its approval to three proposals that will be submitted to the 1967 Legislature. One bill would establish a county board of health in each county, supported by state funds, to enforce state and local health regulations. Another bill would permit public health agencies to charge fees for home health services, and thus to collect federal Medicare payments. The third one would set up a program to control sources of radioactivity.

Robert H. Osborn, son of **Dr. C. R. Osborn,** of Dexter, received his M.D. degree at the commencement exercises in Iowa City on June 10.

Dr. Wendel W. Taylor, of Sheffield, suffered a heart attack and was hospitalized at Mason City, on May 18. **Dr. Dorothy Heuerman,** of Latimer, has undertaken to spend a few hours each week in Dr. Taylor's office during his recuperation.

Dr. Paul Amlie, of Blairstown, has become a member of the American Academy of General Practice.

Dr. William D. Perrin, of Sumner, has accepted a student health post at the University of Arizona. He has practiced in the Bremer County town since 1956.

Dr. Joseph Hudek, of Garnavillo, retired late in May and went to live with a daughter in Wisconsin. He had practiced in Garnavillo for 60 years, and at 84 he was one of the oldest practicing physicians in the state.

For the time being, at least, it seems that the colleges are outdoing the Armed Forces in taking physicians from private practices in Iowa. **Dr. W. E. Chase,** who has served the people of Rippey since 1933, has accepted a student-health position at Iowa State College, Cedar Falls, as of August 1.

On Wednesday, May 18, **Dr. Paul Ferguson,** of Lake City, discussed the relationship between medicine and religion on "Doctor's House Call," over WOI radio, Ames. He is chairman of the IMS Committee on Medicine and Religion.

When no regular program had been scheduled for the May 25 meeting of the Rotary, in Eagle Grove, **Dr. Dale Harding,** president of the organization, filled in by describing some of the activities of the county medical examiner, and comparing them to those of the county coroner under the old system. Since becoming medical examiner, he has recorded his cases on color slides, and has used them as teaching aids in instructing peace officers.

Dr. James H. Dunlevy, of Fairfield, served as a delegate to the third biennial convention of the Lutheran Church in America, at Kansas City, June 21-29. He was one of just three lay delegates from Iowa.

Dr. Kenneth M. Johannsen, of Schleswig, will join **Dr. Frank Edington** in practice at Spencer on July 6. Dr. Johannsen took his bachelor's degree at the University of Iowa and his M.D. degree at the University of Nebraska. He recently completed his internship at Bryan Hospital, in Lincoln. He and his wife have three sons, aged 12, 11 and 5.

Dr. F. O. W. Voigt, of Oskaloosa, was elected president of the Iowa Clinical Medical Society at

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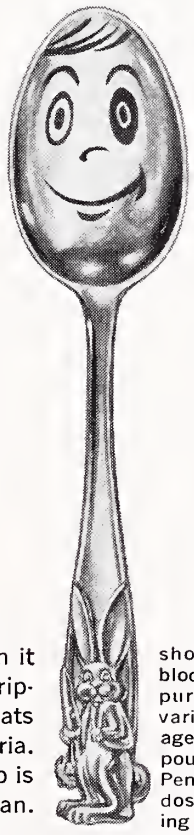

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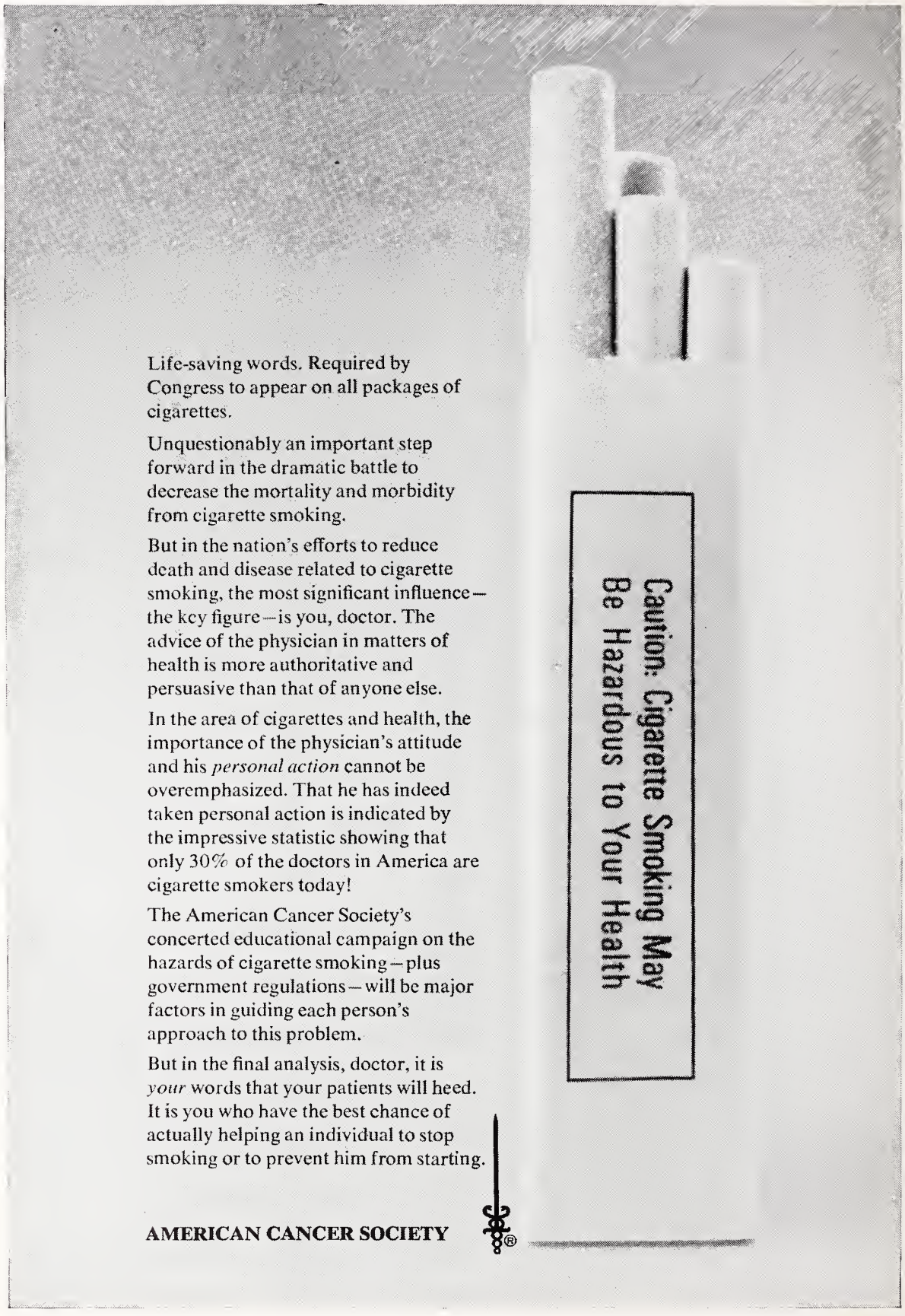

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In the area of cigarettes and health, the importance of the physician's attitude and his *personal action* cannot be overemphasized. That he has indeed taken personal action is indicated by the impressive statistic showing that only 30% of the doctors in America are cigarette smokers today!

The American Cancer Society's concerted educational campaign on the hazards of cigarette smoking—plus government regulations—will be major factors in guiding each person's approach to this problem.

But in the final analysis, doctor, it is *your* words that your patients will heed. It is you who have the best chance of actually helping an individual to stop smoking or to prevent him from starting.

AMERICAN CANCER SOCIETY

the organization's spring meeting at Des Moines on May 21.

Six Iowa physicians were inducted into the American College of Physicians at the 47th annual session of the organization, in New York City during May. They are **Drs. Mark L. Armstrong, Oscar C. Beasley, Willard A. Krehl** and **George B. Theil,** of Iowa City, **Dr. E. A. Motto,** of Davenport, and **Dr. Emil J. Hertko,** of Des Moines.

Dr. L. C. Strathman, who engaged in general practice in Shenandoah from 1957 to 1963, is to join **Drs. John R. Huey** and **John S. Koch** in Cedar Rapids on July 1 as an orthopedist. He took a residency in that specialty at his *alma mater,* Kansas University School of Medicine, when he left Shenandoah.

Shortly before he left Sioux Rapids to take a student health post at the University of Missouri, **Dr. R. J. Mattice** was honored at a farewell picnic in the city park.

Dr. D. C. Koser, of Cherokee, discussed the frontier doctor and his work at the May 23 meeting of the Cherokee County Medical Society. Many of the instruments of early physicians and dentists were on display.

Dr. Max Safley, of Forest City, was the principal speaker at the dedication of a 64-bed nursing home there, on May 29.

The community of Stanhope has finished construction of an office building for **Dr. DeWayne Anderson,** and for a Webster City dentist, **Dr. Jed Norris,** who will practice at Stanhope two days each week. According to a report in the Webster City FREEMAN-JOURNAL, the building reflects a desire of the townspeople to show appreciation for Dr. Anderson's 17 years of service to them.

Drs. Isaac Sternhill, C. V. Edwards, Sr., and **Emmett Mathiasen** headed the medical section of a fund-raising drive for a new 250-bed Mercy Hospital, in Council Bluffs. They announced on June 3 that their goal—$275,000 in pledges—had been achieved. Total cost of the structure will be $7.5 million.

Dr. Thomas R. Nicknish, an internist who had practiced less than a year with **Drs. C. E. Schrock, George E. Anderson** and **Oscar C. Beasley,** in Iowa City, before he was drafted on April 1, has been assigned to Turner Air Force Base, Georgia, as chief of service in the 822nd Medical Group. He expects to return to his practice in Iowa City at the end of his tour of duty.

Dr. David B. Drennan, a general surgeon, has announced his intention of locating in Ft. Madison. He is a 1960 graduate of the St. Louis University School of Medicine, and he served his residency at St. Luke's and St. Louis County Hospitals, St. Louis. He fulfilled his military obligation by serving in the Navy Reserve in 1952-53.

Dr. John E. Kimball, of Chattanooga, Tennessee, a son of **Dr. J. E. Kimball,** of West Liberty, Iowa, died of an accidental gunshot wound on June 2. The younger man was 52; the elder is a Life Member of the Iowa Medical Society.

Dr. Frederick C. Blodi, a professor of ophthalmology, was elected as faculty member of the U. of I. chapter of Alpha Omega Alpha, national honorary medical society, this spring. Twenty students were chosen.

Mr. Gordon Gammack devoted two successive ones of his columns in the DES MOINES TRIBUNE, on June 6 and 7, to **Dr. Lee Forrest Hill,** a Des Moines pediatrician who recently quit private practice.

Dr. Johann L. Ehrenhaft, professor and head of the Division of Thoracic Surgery at the U. of I. College of Medicine, has been elected to a six-year term on the American Board of Thoracic Surgery.

Dr. Christian E. Radcliffe, a professor of dermatology at the U. of I., has been made a fellow of the American College of Physicians.

On Memorial Day, **Dr. Fred Sternagel,** of West Des Moines, delivered the commencement address at Rocky Mountain College, Billings, Montana. Dr. Sternagel was born in Anaconda, Montana, and took his bachelor's degree at Montana Wesleyan College. He received his medical training at Northwestern University, and has practiced in Iowa since 1930.

Dr. John B. Dixon, a Mason City ophthalmologist, was one of the speakers at the sixteenth annual

convention of the Licensed Practical Nurses' Association of Iowa, on June 6 in Mason City.

At the annual meeting of the Iowa Public Health Association, in Des Moines during May, **Dr. Kenneth K. Hazlet**, of Dubuque, vice-president of the IMS, accepted a certificate of merit on behalf of the Society for the excellence of its exhibit at the meeting.

A resident physician and a sophomore medical student at the U. of I. College of Medicine won first- and third-place honors for papers presented at the Eighth Annual Meeting of Midwest Anesthesia Residents, in Columbia, Missouri, on May 3. **Dr. Michael Cristoforo** took top honors with a paper on "The Effects of Halothane and Cyclopropane on Sympathetic Activity and Baroreceptor Reflexes," and **Mr. Larry Rigler**, of Adair, won third place with a paper describing "The Effects of Change in Left-Ventricular End-Diastolic Pressure as Seen with Cyclopropane Anesthesia on Lung Compliance in Dogs." Nineteen papers were entered in the contest.

Dr. Lewis E. January, professor of internal medicine at the U. of I. College of Medicine, was awarded an honorary Doctor of Science degree at commencement exercises of Colorado College, Colorado Springs, on May 30. Dr. January received his B.A. degree there in 1933.

Dr. Robert E. Carter, assistant dean of the U. of I. College of Medicine and a professor of pediatrics, spoke on "The Promising Future of General Practice" at the annual meeting of the Washington Academy of General Practice, in Spokane on May 13. On May 16, he spoke on "The General Practitioner of Tomorrow" at a meeting of the Minnesota Academy of General Practice, in St. Paul.

On Tuesday evening, May 24, **Dr. Robert S. Jaggard**, of Oelwein, was the speaker at a dinner meeting of the Carroll and Calhoun County Medical Society members and their wives, at the Burke Motor Inn, in Carroll. His topic was "Freedom."

Dr. Frederick C. Blodi, professor of ophthalmology at the U. of I. College of Medicine, has been appointed representative of the AMA Section on Ophthalmology for the International Congress of Ophthalmology, which will be held in August at Munich, West Germany. He also serves as an oph-

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thalmology representative on the AMA Council on Postgraduate Programs, which is responsible for the scientific programs, motion pictures and scientific exhibits at the AMA annual and clinical conventions.

Addressing the graduating class at the U. of I. College of Medicine, in Iowa City on June 9, **Dr. Arthur P. Long,** the state commissioner of health, said that modern man lives today with at least as much disease and disability as in the past, and he called the increased longevity of today largely an illusion. Though life expectancy at birth has increased nearly 30 years, he pointed out that life expectancy for a person 65 years of age has risen only four or five years, and furthermore that those few years represent, in many cases, mere survival by means of intricate and expensive medical procedures, rather than truly healthful years. Hope for further progress, he declared, lies in the anticipation and prevention of disease, and all effective programs of that sort depend upon a team approach.

The Johnson County Medical Society held its annual picnic at the home of **Dr. H. R. Jenkinson,** on Lake Macbride at Solon, Iowa, June 1.

Dr. Ralph Dorner, of Des Moines, was elected president of the Iowa Thoracic Society at the group's recent annual meeting.

Recent physician participants and their topics in the radio program "Ask the Expert," on WHO, Des Moines, 2:30-4:00 Monday afternoons, are: May 23, "Hernia," **Dr. Rutledge C. Schropp;** June 6, "Diseases of the Lungs and Chest," **Dr. Alexander Matthews;** June 13, "Medicare," **Dr. Elmer Smith;** June 20, "Arthritis and Rheumatism," **Dr. Samuel J. Zoeckler;** and June 27, "Obstetrics and Gynecology," **Dr. Beverly Robinson.** The appearances are arranged by the Public Relations Committee of the Polk County Medical Society.

Mrs. Ida P. Hamilton, wife of **Dr. Ben C. Hamilton,** of Jefferson, died on May 8.

The Vocational Rehabilitation Division of the HEW Department announced over 200 grants for new or continuing projects in its field on June 18. Two of them were to the University of Iowa—$35,600 for evaluation of the pathomechanics of ulnar deviation of the fingers, and $49,400 for programmatic research on methods of continuing education for rehabilitation counselors.

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The Seven-Up Bottlers Of Iowa

Vera M. Sage, R.N., retired on June 30 as executive director of the Iowa Board of Nursing, after serving that organization since 1935. Her successor is **E. Frances Stoney, R.N.,** her erstwhile assistant. The Board administers examinations to nursing-school graduates.

Dr. Eugene F. Van Epps, professor and head of radiology at the U. of I. College of Medicine, has been reelected treasurer of the American Board of Radiology.

Deaths

Dr. Edwin J. Goen, 67, who had practiced for 26 years in Charles City, died at the Floyd County Memorial Hospital, there, on May 11. He had been in poor health for about three months. A 1924 graduate of the U. of I. College of Medicine, he had practiced at Greeley, Decorah and Manchester before coming to Charles City.

Dr. Kurt Jaenicke, 83, died on June 7 at his home in Clinton. The son of a Clinton general practitioner, Dr. Jaenicke took his M.D. degree at the University of Iowa in 1905, did postgraduate work in Europe, and returned home to practice. He was a Life Member of the Iowa Medical Society.

Dr. Edward O. Loxtercamp, 49, died suddenly at his home on May 29. He was born and brought up in Carroll County, Iowa, and took his M.D. degree at Creighton in 1944. He had practiced at Rolfe since 1949.

Dr. William E. Anspach, 74, a radiologist who practiced for 15 years in Iowa, died on May 26, of Parkinson's disease, in Riverside, Illinois. He was on the staff of his *alma mater,* the Northwestern University School of Medicine, for many years. Burial took place in Ida Grove.

Dr. Raymond S. Grossman, 83, of Marshalltown, died suddenly on Memorial Day at his home. He had felt well and had called on patients the previous day. He was a former president of the Iowa Clinical Medical Society.

Dr. Thomas J. Dorsey, 80, a longtime Ft. Dodge physician, died at the home of his son-in-law and daughter, there, on May 24, following a short illness.

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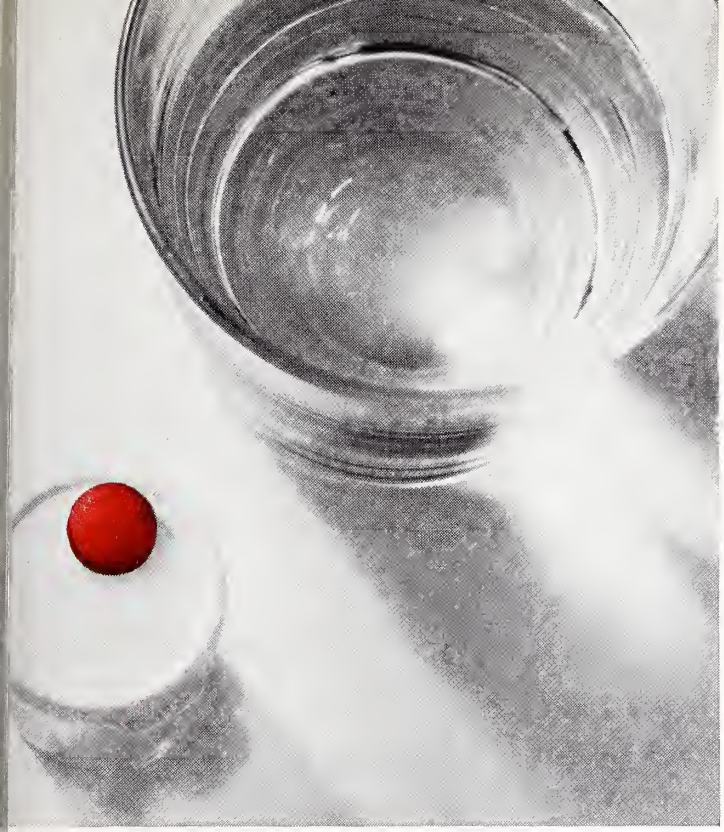

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Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

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Insurance Premiums Increase for Doctors

The rising cost of malpractice suits throughout the nation is forcing a general increase in premiums for liability insurance for physicians and surgeons. The National Bureau of Casualty Underwriters—the organization which determines premium rates for member and subscriber companies which together write a large volume of professional liability insurance—announced that as of June 1 average rate increases ranging from 10 to 30 per cent for physicians and surgeons' liability will go into effect in 27 states.

The increases constitute the first major revision in three years, the NBCU said, and were made necessary by continued substantial underwriting losses. The percentage increases, listed by state, are as follows:

Ariz.	30.0%	Ill.	10.0%
Ark.	10.0	Ind.	10.0
Colo.	25.0	Iowa	22.0
Conn.	10.0	Kans.	15.0
Del.	15.0	Mass.	30.0
D.C.	13.3	Mich.	20.0
Hawaii	10.0	Mo.	15.0
Idaho	10.0	Nebr.	30.0
Nev.	30.0%	Tex.	20.0%
N. Mex.	30.0	Utah	25.0
N. Dak.	15.0	Vt.	10.0
Ohio	10.0	W. Va.	20.0
Oreg.	30.0	Wyo.	10.0
S. Dak.	15.0		

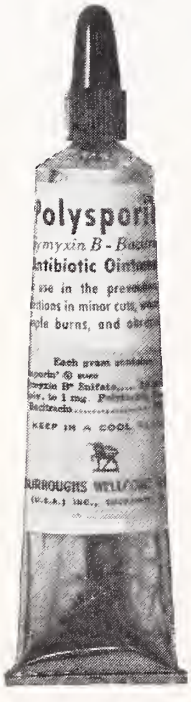
In the five-year period from 1958 through 1962—the last years for which complete data are available—loss costs per insured physician and surgeon rose 40.8 per cent countrywide. In 1958, Bureau companies paid out a combined average of $99.63 in losses for each insured. By 1962, that figure had risen to $140.35.

The National Bureau pointed out that during that same five-year period Bureau companies sustained large underwriting losses on liability coverage for both physicians and surgeons. On the physician classes, losses and expenses amounted to $136 for each $100 in premiums during 1958-1962. This means that companies sustained a loss of $36 for each $100 of premium.

On the surgeons' classes, losses and expenses totaled $125.20 for each $100 of premiums during the same period.

The NBCU said that in view of the extremely adverse experience in these lines, the June rate revisions must be described as "moderate."

in treating topical infections, no need to sensitize the patient



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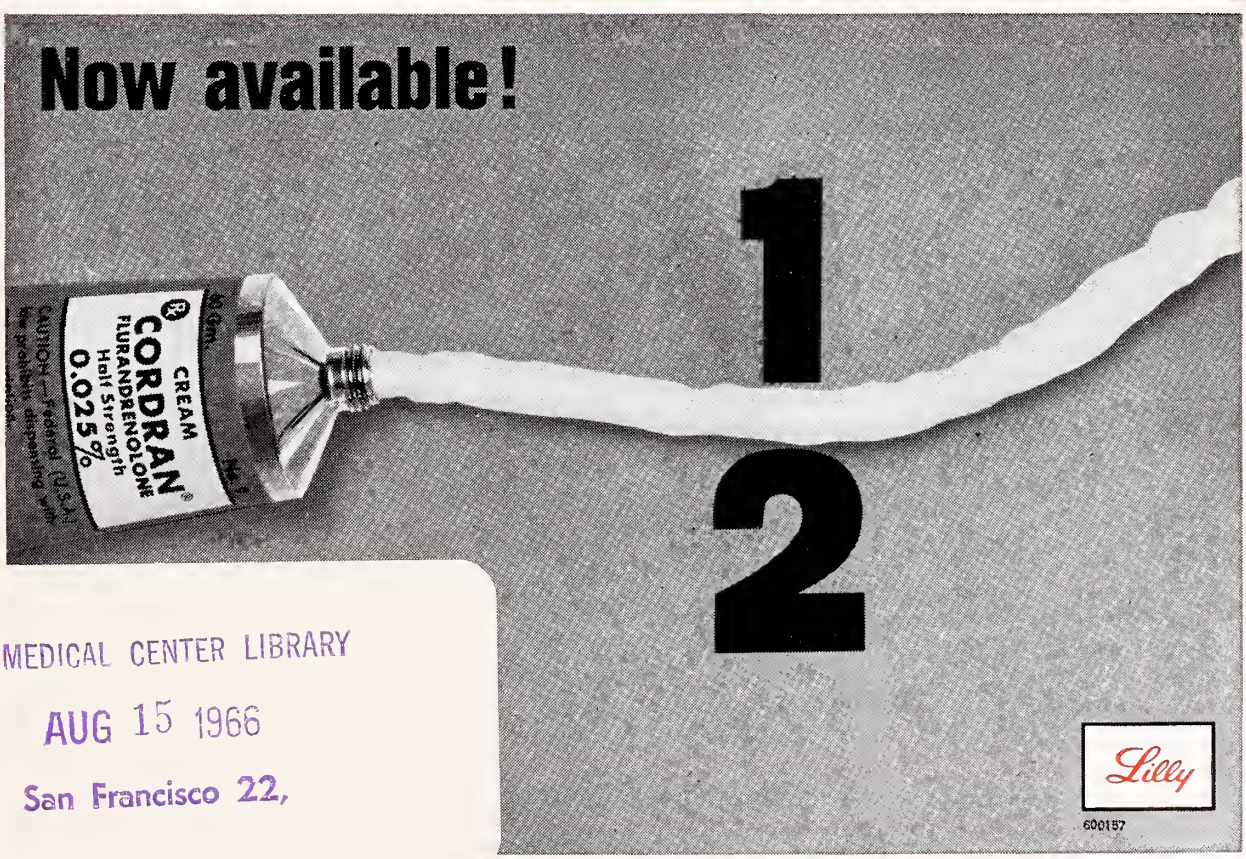

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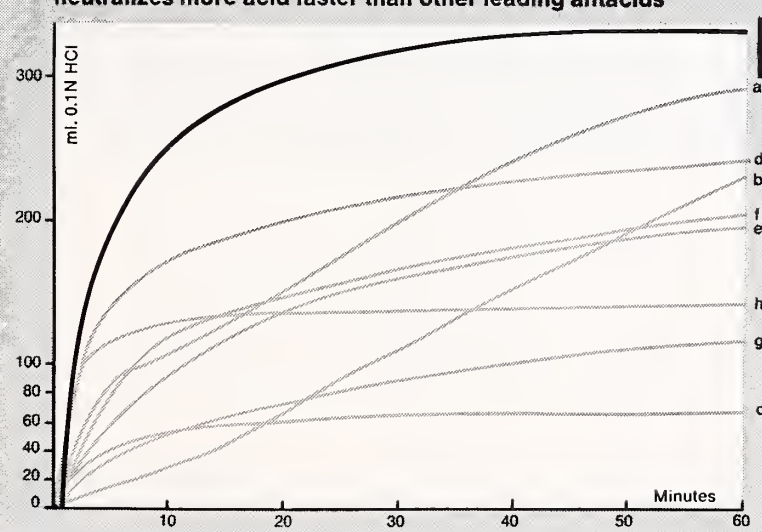
In recent laboratory comparisons* with eight other leading antacids, new WinGel tablets not only neutralized more hydrochloric acid per active-ingredient weight, but neutralized it faster and longer than all other antacids tested.

Pleasant pink in color, WinGel is delicately mint flavored with a smooth-as-cream texture—qualities sure to please the patient on long-term therapy. New WinGel is also specially formulated to avoid constipation or diarrhea.

New WinGel neutralizes 300 times its active-ingredient weight in 0.1N hydrochloric acid—neutralizes more acid faster than other leading antacids



Rate of 0.1N hydrochloric acid neutralization at pH 3.5 and 37° with WinGel and eight other leading antacid tablets—*in vitro*. Samples equaled the weight of tablet material containing 1.0 Gm. active ingredients.*

*Hinkel, E. T., Jr. (New York): Data in the files of the Department of Medical Research, Winthrop Laboratories.

Dosage: Peptic ulcer or gastritis—from 2 to 4 teaspoons of WinGel liquid or 2 to 4 tablets chewed or allowed to dissolve in the mouth every two to four hours. **Gastric hyperacidity**—2 tablets or teaspoons about ½ to one hour after meals as needed; children from 7 to 14 years of age, 1 or 2 tablets or 1 or 2 teaspoons of liquid as needed.

How Supplied: Liquid in bottles of 8 fl. oz. and 1 pint. **Tablets** in cellophane strips, boxes of 50 and 100. (One teaspoon of WinGel liquid is equivalent to one WinGel tablet in acid-combining capacity.) WinGel, trademark reg. U.S. Pat. Off.

Winthrop Laboratories, New York, N.Y. 10016 Winthrop

Finally — a taste your patients will truly like

(1058M)

The Month in Washington

Washington, D. C.—Health manpower and medical research are being reviewed in two comprehensive studies being conducted by the federal government. President Johnson called on the new National Advisory Commission on Health Manpower for an evaluation of the use of available government and non-government health manpower. He also asked for Commission recommendations on expanding the supply of health manpower.

"The national demand for health manpower today exceeds the supply—and this may be the case for several years," Johnson told the Commission. "This fact gives your job a special importance . . .

"First, I need your advice about the federal government's use of its health manpower:

—"Are we setting an example for the nation in the efficient use of health manpower?

—"Should we establish new forms of health manpower utilization?

"Second, we need answers to these same questions as they apply to non-federal health manpower.

"Third, we need your advice on how to develop additional health manpower—not only high-level specialists, but technicians and allied health professionals."

The Advisory Committee met for the first time a few days after the House unanimously passed and sent to the Senate a bill to train more health workers. The measure sets up a three-year, $155 million program of aid aimed at training some 12,000 additional allied health workers such as medical technologists, therapists, X-ray technologists, dental hygienists, nutritionists, and laboratory technicians. The legislation authorizes half the money for improving health-worker training facilities and programs at qualified universities, colleges and junior colleges. The other half would go into a program of fellowship grants and federally guaranteed loans for students. The bill also would authorize increased student-loan forgiveness for physicians, dentists and optometrists who set up practice in poor rural areas where the supply of medical personnel is short or nonexistent.

Mr. Johnson instructed 23 Administration leaders in medicine and health matters, including Health, Education and Welfare Secretary John W. Gardner and the directors of the national health institutes, to re-examine their priorities to determine whether research activities should be slowed down and more effort devoted toward making practical use of research findings.

He asked for a report in a few months on a general reassessment of National Institutes of Health goals, effectiveness of current medical research programs, proportions of NIH funds being spent on basic research and on applied research, and major obstacles confronting the institutes in translating research findings into practical benefits. The President was reported to have shown concern in a meeting with his top medicine and health advisors that too much is being spent "for the sake of research alone." Similar concern has been voiced by some non-government individuals knowledgeable in the health field.

National expenditures for medical research have increased from $87 million in 1947 to an estimated $1.85 billion last year. About two-thirds of the 1965 total was federal money, and about four-tenths of the total was administered by the National Institutes of Health. In the two decades following World War II, NIH annual appropriations have zoomed from $3 million to $1.25 billion. In recent years, Congress has voted NIH more money than the Administration requested.

"The National Institutes of Health are spending more than $800 million a year on biomedical research," Mr. Johnson said. "I am keenly interested to learn not only what knowledge this buys but what are the payoffs in terms of healthy lives for our citizens . . .

". . . The nation faces a heavy demand on its hospitals and health manpower. Medical research, effectively applied, can help reduce the load by preventing disease before it occurs, and by curing disease when it does strike.

"But the greater reward is in the well-being of our citizens. We must make sure that no life-giving discovery is locked up in the laboratory."

* * *

The Food and Drug Administration has issued new regulations tightening the requirements for special diet foods and diet supplements. The revised regulations are aimed at providing the consumer with more facts about the foods for weight control, for dietary supplementation with vitamins and minerals, and for other special diet needs, such as controlling salt intake, according to Dr. James L. Goddard, the head of FDA.

The new regulations set standards for certain foods to which nutrients may be added only if they have real value. A Recommended Dietary Allow-

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown® (meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-5761

ances also is included as a guide to meeting nutritional needs. The new regulations will prohibit extravagant promotion of "shotgun" multi-vitamin and mineral supplements containing nutrients that meet no dietary need and tend to deceive the consumer.

The revised labeling regulations and the new standards for fortified foods and vitamin and mineral supplements are scheduled to become effective in December.

A general revision of regulations on special dietary foods and vitamin-mineral supplements was proposed by the FDA four years ago. More than 50,000 comments were received on the provisions suggested at that time. The new regulations are the result of a review of the 1962 proposals and the comments and recommendations received about them.

Dr. Goodard said the new requirements should sweep away many of the common misconceptions about the kinds and amounts of vitamins and minerals needed in the diet, and how they are obtained. He said, "Most Americans eat foods that provide all the vitamins and minerals normally required for good health."

Multi-vitamin and mineral products will be required by the regulations to bear the following label:

> "Vitamins and minerals are supplied in abundant amounts by the foods we eat. The Food and Nutrition Board of the National Research Council recommends that dietary needs be satisfied by foods. Except for persons with special medical needs, there is no scientific basis for recommending routine use of dietary supplements."

The Pharmaceutical Manufacturers Association said that the new restrictions are "not in the public interest." A spokesman for the Association said that when the Food and Drug Administration proposed similar regulations in 1962, "We found serious differences of opinion among nutritionists and other scientists as to the scientific basis for the proposals."

A spokesman for the National Health Federation, predicted that consumers will rebel against the regulations. He promised, "Congress will get more letters on this than on any other issue—*any* other." The Federation is an organization of the manufacturers and distributors of unusual "health foods" and "super" vitamins.

The Drug and Allied Products Guild, composed of smaller drug manufacturers and distributors, voted authority for its officers to assess the 97 regular members up to $500 each to hire special lawyers to prepare arguments against the FDA regulations.

Bamadex® Sequels®

Contraindications: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.

First aid for a button popper

Second aid for a button popper

Bamadex® Sequels®

d-amphetamine sulfate (15 mg.) and meprobamate (300 mg.) Sustained Release Capsules

By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients makes possible convenient one-capsule-a-day dosage.

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Lederle

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Coming Meetings

IN STATE

Sept. 10	**13th Annual Internal Medicine Symposium,** sponsored by the **Section of Internal Medicine of Iowa Methodist Hospital,** Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.
Sept. 18	**IMS Fall Conference for County Medical Society Officers and Other Representatives,** Hotel Fort Des Moines, Des Moines.
Sept. 19-20	**18th Scientific Meeting, Iowa Chapter American Academy of General Practice,** Hotel Savery, Des Moines.
Sept. 19-21	**Prevention and Control of Hospital Infections,** Hotel Fort Des Moines, Des Moines.
Sept. 21-23	**Postgraduate Conference, Three Days of Cardiology, University of Iowa College of Medicine,** Iowa City.
Sept. 30	**Postgraduate Conference, Otolaryngology for the General Practitioner, University of Iowa College of Medicine,** Iowa City.

CONTINENTAL U. S.

Aug. 1-5	**Postgraduate Course in Pediatrics, University of Colorado School of Medicine,** The Stanley Hotel, Estes Park.
Aug. 5-6	**Black Hills Fall Seminar,** Surbeck Student Center, South Dakota School of Mines and Technology, Rapid City.
Aug. 8-12	**71st Annual Session, National Medical Association,** Pick-Congress Hotel, Chicago.
Aug. 8-12	**Postgraduate Course in Internal Medicine, University of Colorado School of Medicine,** Estes Park.
Aug. 12-13	**National Conference on Infant Mortality, sponsored by the AMA Committee on Maternal and Child Care,** Fairmont Hotel, San Francisco.
Aug. 12-14	**International Doctors in Alcoholics Anonymous,** Speedway Motel, Indianapolis.
Aug. 18-20	**Rocky Mountain Radiological Society,** Brown Palace Hotel, Denver.
Aug. 24-25	**Postgraduate Course on Psychiatry in Clinical Practice, Medical College of Georgia,** Augusta.
Aug. 24-26	**13th Western Cardiac Conference, University of Colorado Medical Center,** Denver.
Aug. 25-27	**University of Wisconsin Cancer Conference, "New and Old Approaches to Therapy of Advanced Cancer,"** University of Wisconsin, Madison.
Aug. 25-27	**West Virginia State Medical Association,** The Greenbrier, White Sulphur Springs.
Aug. 28-Sept. 2	**American Academy of Physical Medicine and Rehabilitation,** Sheraton Palace Hotel, San Francisco.
Aug. 30-Sept. 2	**Wyoming State Medical Society,** Lake Lodge, Moran.
Sept. 6-8	**International Symposium on Selenium in Biomedicine, Oregon State University,** Corvallis.
Sept. 10-12	**93rd Meeting of North Pacific Pediatric Society,** Alderbrook Manor, Union, Washington.
Sept. 11-15	**Decennial Conference on "Cell, Tissue, and Organ Culture"** sponsored by the **Tissue Culture Association,** Bedford, Pa.
Sept. 11-16	**12th Annual Meeting, Flying Physicians Association,** Dunes Hotel and Country Club, Las Vegas.
Sept. 14	**Second Annual Symposium on Renal Disease, Upper Midwest Chapter of the National Kidney Foundation,** St. Paul Hilton Hotel, St. Paul.
Sept. 15-16	**Interprofessional Seminar on Diseases Common to Animals and Man, Kansas State University College of Veterinary Medicine,** Manhattan.
Sept. 16-17	**Neurological Problems in Office Practice, University of Missouri Medical Center,** Medical Center Auditorium, Columbia.
Sept. 18-21	**Washington State Medical Association,** Davenport Hotel, Spokane.
Sept. 25-28	**Colorado Medical Society,** Broadmoor Hotel, Colorado Springs.
Sept. 25-30	**3rd International Congress of Nephrology,** Washington Hilton Hotel, Washington, D. C.
Sept. 25-30	**Michigan State Medical Society,** Pantlind Hotel, Grand Rapids.
Sept. 26-28	**26th Annual Congress on Occupational Health,** sponsored by the **AMA Council on Occupational Health,** Sheraton Hotel and Memorial Coliseum, Portland.
Sept. 26-30	**17th Annual Meeting of the Animal Care Panel,** Edgewater Beach Hotel, Chicago.
Sept. 27-Oct. 1	**Oregon Medical Association,** Portland.
Sept. 28-30	**American Association of Medical Clinics,** del Coronada Hotel, San Diego.
Sept. 29-Oct. 1	**ACOG District VI Meeting,** Sheraton-Fontenelle, Omaha.

ABROAD

Aug. 8-13	**2nd European Congress, World Federation of Societies of Anesthesiologists,** Copenhagen.
Aug. 9-12	**2nd Congress, International Association of Accident and Traffic Medicine,** Stockholm.
Aug. 14-19	**International Congress of Ophthalmology,** Munich.
Aug. 15-18	**4th International Meeting on Forensic Immunology, Medicine, Pathology, and Toxicology,** Copenhagen.
Aug. 18-20	**Canadian Association of Physical Medicine and Rehabilitation,** Edmonton, Alberta, Canada.
Aug. 20-25	**International Congress on Diseases of the Chest, American College of Chest Physicians,** Copenhagen.
Aug. 21-26	**11th Congress, International Society of Hematology,** Sydney.
Aug. 22-29	**4th Latin-American Congress of Psychiatry and 6th Latin-American Congress of Mental Health,** Buenos Aires.
Aug. 24-29	**11th Congress, International Society of Blood Transfusion,** Sydney.
Aug. 31-Sept. 5	**8th Annual Meeting International College of Angiology,** Madrid.
Sept. 4-9	**International Society of Orthopedic Surgery and Traumatology,** Paris.
Sept. 5-11	**4th World Congress of Psychiatry,** Madrid.
Sept. 6-10	**3rd Congress, Latin-American Association of Proctology,** Santiago.
Sept. 8-10	**International Symposium on Atherosclerosis and Reticulo-Endothelial System,** Como, Italy.
Sept. 11-14	**1st International Congress, American Society of Abdominal Surgeons,** Rome.
Sept. 15-18	**8th Congress, International College of Medical Practice,** Salzburg, Austria.
Sept. 15-18	**3rd International Congress of Psychosomatic Medicine,** Paris.
Sept. 18-24	**World Congress of Gastroenterology,** Tokyo Prince Hotel, Tokyo.
Sept. 20-24	**36th Annual Meeting, German Society of Gynecology,** Hanover.
Sept. 26-28	**4th Annual Scientific Assembly, College of General Practice of Canada,** Ontario Chapter, Toronto.
Sept. 29-Oct. 1	**7th Annual Meeting, Anglo-German Medical Society,** Bad Nauheim, Germany.
Oct. 1-4	**15th Congress International College of Surgeons,** Mexico City.
Oct. 3-6	**63rd French Congress of Otorhinolarynology,** Paris.
Oct. 3-7	**Symposium on Solid-State and Chemical Radiation Dosimetry in Medicine and Biology, International Atomic Energy Agency,** Vienna.
Oct. 3-8	**6th International Congress of Clinical Pathology,** Rome.
Oct. 6-8	**Annual Meeting, European Academy of Allergology,** Brussels.

(Continued on page 869)

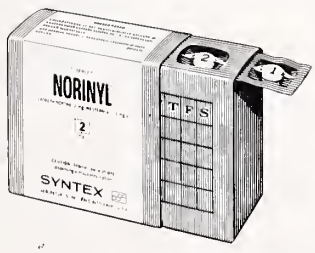
plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF

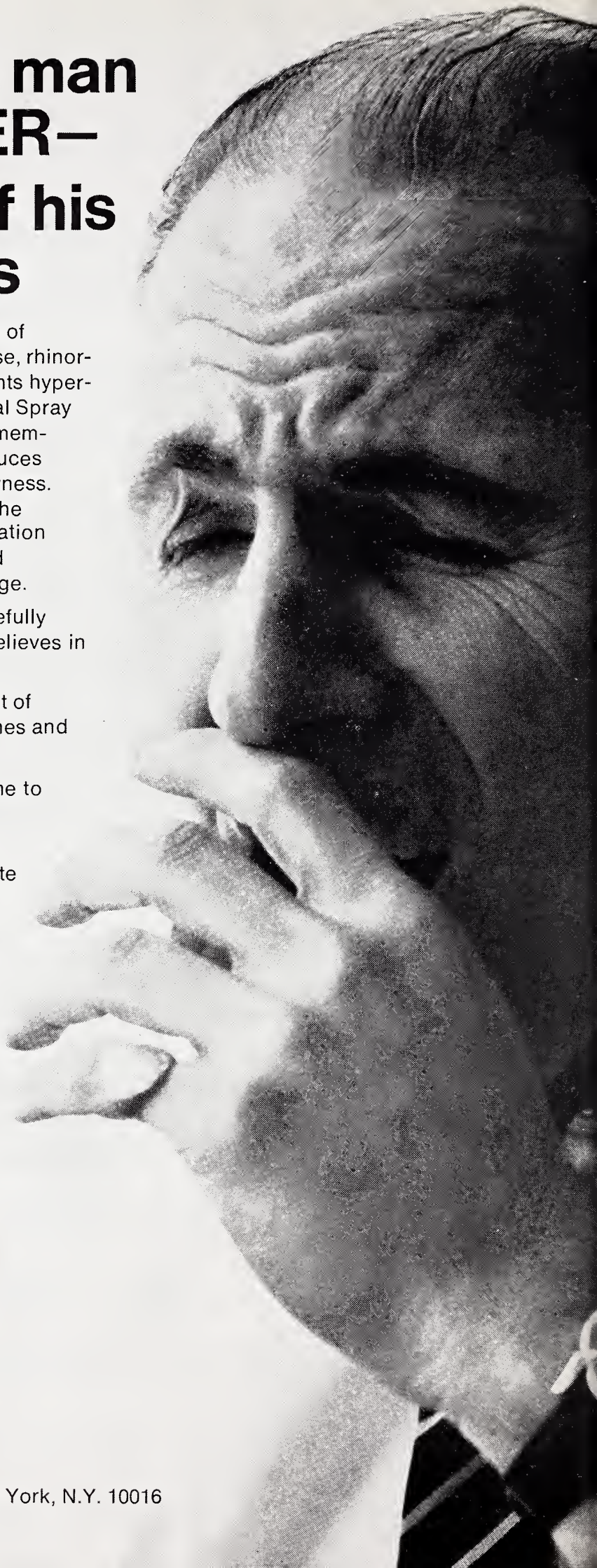
Norinyl® tablets

(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action

Once merely a man with HAY FEVER—

now a victim of his own antibodies



Whatever term describes him in this new era of immunology, the symptoms of congested nose, rhinorrhea and sneezing haven't changed in patients hypersensitive to pollens and molds. But NTZ® Nasal Spray relieves the symptoms. It decongests nasal membranes on contact, relieves itching and reduces excessive rhinorrhea without unpleasant dryness. The first spray of well-tolerated NTZ shrinks the turbinates, helps restore normal nasal ventilation and breathing. After a few minutes, a second spray enhances sinus ventilation and drainage.

More than a simple vasoconstrictor, the carefully balanced formula of effective components relieves in three ways with:

- **N**eo-Synephrine® HCl 0.5%, a decongestant of unexcelled efficacy to shrink nasal membranes and allow more comfortable breathing.
- **T**henfadil® HCl 0.1%, a topical antihistamine to help relieve itching and rhinorrhea.
- **Z**ephiran® Cl 1:5000, an excellent wetting agent and antiseptic preservative to promote the rapid spread of components to less accessible nasal areas.

Supplied in convenient pocket-size plastic spray bottle of 20 ml. Also available as a solution of 30 ml. (1 fl. oz.) with dropper, and 473 ml. (1 pint).

Prescribe

NTZ® Nasal Spray

(contains Neo-Synephrine HCl)

Winthrop Winthrop Laboratories, New York, N.Y. 10016

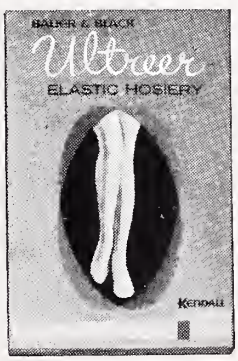
If you can't alarm her into wearing elastic stockings...

charm her with Ultreer™

You see, a woman simply has no defense against Ultreer Elastic Stockings. They look like lovely support stockings. They feel like lovely support stockings. They're that sheer, and shapely and comfortable.

But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. Each pair provides the therapy you prescribe. And at such a low price, a woman can afford two pairs of Ultreer as easily as she can afford one pair of ordinary elastic hosiery.

Ultreer. What a stocking.



KENDALL
BAUER & BLACK SUPPORTS DIVISION

Frankly, most antihypertensives are pretty good if you give an adequate dose. I'm looking for one with a simple regimen so that mix-ups in doses and therefore the chance of side effects are minimized.

Regroton®

chlorthalidone 50 mg. reserpine 0.25 mg.

1 tablet daily brings pressure down

Advantage: Both components of Regroton are long-acting.
Average dosage: One tablet daily with breakfast.
Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.
Warning: Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs. With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.
Side effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.
For full details, see the complete prescribing information.
Availability: Bottles of 100 and 1000 tablets.

Geigy

Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
(initial adult dose)

NegGram®

Brand of

nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.

- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]. . .However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

ications: Urinary tract infections caused by gram-negative and some gram-itive organisms.

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cautions: As with all new drugs, blood and liver function tests are advis-e during prolonged treatment. **Pending further experience, like most motherapeutic agents, this drug should not be given in the first trimester regnancy. It must be used cautiously in patients with liver disease or ere impairment of kidney function.** Because photosensitivity reactions have urred in a small number of cases, patients should be cautioned to avoid ecessary exposure to direct sunlight while receiving NegGram, and if a ction occurs, therapy should be discontinued. The dosage recommended adults and children should not arbitrarily be doubled unless under the eful supervision of a physician. Bacterial resistance may develop.

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ferences: (1) Based on 23 clinical papers, 1512 cases. Bibliography on quest. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: timicrobial Agents and Chemotherapy—1964, Ann Arbor, American ciety for Microbiology, 1965, p. 722.

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Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.

"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

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Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

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For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: **1.** Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. 44:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. 1:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

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rarely observed reactions have included dizz
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crease in eosinophil count, flushing of face
gastrointestinal symptoms.

One instance each of pancytopenia and
penia, occurring when carisoprodol was a
istered with other drugs, has been reported, a
an instance of fixed drug eruption with carisop
and subsequent cross reaction to meproba
Rare allergic reactions, usually mild, have inc
one case each of anaphylactoid reaction with
shock and angioneurotic edema with respi
difficulty, both reversed with appropriate the
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carisoprodol should be discontinued and app
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To Die as a Man: Disease, Truth, and Christian Ethics

WAYNE G. JOHNSON, B.D.
Iowa City

By now, the furor precipitated by Jessica Mitford's the american way of death has generally subsided. The book has long been absent from the best seller lists, the humor occasioned by the author's style and illustrative verve is no longer common conversation, and many funeral directors are beginning to breathe more easily in the calm of the common routine and the apparent stability of their business.

It seems fair to conclude that the popularity of the book can be accounted for by the inherent impact of and interest in the topic. After all, death is a universal phenomenon. More than that, it is a universal *problem* for the human species. It was the problematic nature of death that was expressed in a number of ways in Miss Mitford's book, whether one agreed or disagreed with her analysis and prescription. Although, abstractly, we all freely grant the universality of the phenomenon of death, it still appears to be a problem when it makes its sharply personal and painfully intimate intrusion into our own experience. Perhaps, as Miss Mitford's book indicated, we *do* seek to avoid death's reality. Almost every available euphemism is used in order to avoid the word *death*. Funeral services are tucked away in neat, respectable funeral homes, away from the current of life, so that death can be compartmentalized—somehow bracketed off from the daily round of things.

It is the problematic nature of death which poses a related question. For if we have chosen to compartmentalize death and so seal it off from the routine of our living, perhaps we also too often compartmentalize the dying. Faced with the reality of a possibly terminal disease, those who surround the patient often choose (or are driven) to ignore the topic in their relationship with the stricken person and feed him verbal placebos intended, evidently, to make the way easier, if not to remedy the threat. The question we are posing is an old one: "Should a patient with an apparently terminal disease be told the nature of his illness?" It is a complex question involving such matters as human relationships, the meaning of love, resources for facing death, and even the matter of simple honesty—if honesty is ever simple.

Reverend Mr. Johnson expects to receive his Ph.D. in religion at the University of Iowa this month. His first bachelor's degree, in civil engineering, was from Iowa State University. Next year, he will teach philosophy and religion at Carthage College, Kenosha, Wisconsin.

IMPLICATIONS AND COMPLICATIONS

Before suggesting a possible solution, let us attempt a survey of the factors which complicate the question. Individual cases may have their unique considerations, yet almost all cases share a core of interrelated facets.

Initially, there is the question of whether or not the patient himself genuinely desires to know the medical prognosis. Anyone who has worked with the sick and the dying knows that, in some types of diseases especially, many patients seem to avoid any direct encounter with "the truth," as we somewhat presumptuously phrase it. They remain silent when one might expect them to ask questions; they avoid certain words which are anxiety-laden; and many times they seem to be deliberately deaf or noncomprehending when the nature of the disease is mentioned. When doctors or families face this resistance, they may well be inclined to let the patient have his apparent way and to give him only such information as he appears to want. It seems patently fair to allow the patient his wish in this matter—even his wish for ignorance.

Still, there is an illusory element in this conclusion, as there is in nearly every simplicistic stance. After all, it is not easy to determine what, in final fact, the patient truly desires. A patient can avoid facing the truth for many reasons, and among these may be his realization that the truth is not only painful for him, but also painful for those whose lives impinge upon his—such as the medical personnel and his loved ones. In Samuel Stoddard's book should the patient know the truth?, an articulate patient reflects on this experience. Although he was quite aware of the nature of his disease, he avoided the disturbing question, "What is it, doctor?" because he sensed the emotional burden that such a question would lay on

the doctor himself. We cannot detect a person's depth from his words only. The patient may dearly want to know the estimated state of affairs; he may earnestly desire to discuss the entire situation with a fellow being. But if there is no one available who can share and thus bear the news openly, intimately and humanly, the patient may well choose feigned ignorance instead of an encounter which threatens both himself and those around him. In short, whether or not a patient "wants" to know the truth may depend as fully upon the characteristics of the doctor and staff and family as it does upon the patient.

A related question arises. Is it ever possible to veil the truth from a patient? It is, to be sure, possible to avoid telling the patient outright, either by prefabrication or by speaking in vague or euphemistic terms. Yet, as Joseph Fletcher once observed, "It is amazing how few good liars (to use a curious and contradictory phrase) there are in such intimate relationships as illness and medical care."[1] Out of his own experience Dr. Richard Cabot wrote:

> "As a young physician I tried the usual system of benevolent lying from 1893 to 1902. About that time, a bitter experience convinced me that I could not be an amateur liar—an occasional, philanthropic liar—in medicine or in any part of life. I swore off and have been on the water wagon of medical honesty ever since."[1]

Veiling the truth may be an exercise reserved for the conversationally nimble, and in any event it seems that most patients are aware, in their own way, of the natures of their diseases. Almost any literate person who has lived a few decades is quite aware of certain of the symptoms of the major terminal illnesses. Most hospital chaplains have discovered that with surprising regularity patients sense the implications of their diseases, even though no one has told them of them. A recent study of children suffering from leukemia revealed that such youngsters seem to understand their plight, even when the nature of their disease has not been told to them. Peter DeVries' THE BLOOD OF THE LAMB gives a haunting portrait of such circumstances. To assume that veiling the truth is easy in these circumstances is to miss the subtle nature of much nonverbal communication. We tell much more than we state.

A further consideration is the matter of the fear of deception among those who are, in fact, free of a dreaded disease. How many persons there are who, having undergone surgery, hesitate to believe the truth the doctor tells them because they have known of several people who were never told of the nature of their problem. In February, 1923, after the death of Jim Corbett, the NEW YORK TIMES ran a story with this headline: "Ex-champion Succumbs Here to Cancer. He Believed He Had Heart Disease." Aside from the irony of the situation—is there, after all, any advantage in dying of heart disease rather than of cancer?—the article brought rebuke from doctors when they found that many of their own heart patients, after reading the article, had become wild with the fear that they too had cancer of the liver. Such is the social structure of deception.

In all fairness, let us grant that the intent behind withholding the truth is usually that of sparing the patient distress. Yet one needs to question the adequacy of the method, if not the aptness of the motive. In what human sense is it "protection" or "sparing" when we keep from a person the evident fact that his days are seriously numbered? Does not such veiling of the truth tend to sunder human relationships at a critical depth level? The doctor, it seems, is professionally obligated to tell someone. Usually this person is the patient's mate, some other close relative, or the patient himself. Yet how humanly tragic are those situations where loved ones must attempt to relate to their dearest human companion and yet are unable to share the experience of dying in an open and intimate way! In attempting to "spare," we "isolate," and we do this precisely at that time when we should be most closely drawn together. To be sure, the sharing of such an experience calls for deep resources, since it inevitably involves anguish and pain. But is not pain a part of the cost of loving? Perhaps if we had our stance in some exotic Eastern sect, we could justify attempts to avoid such pain by way of detachment. But we believe that Christianity holds to a more profound perspective. The Christian accepts pain for the sake of and in the name of love, and thereby pain and life itself are sanctified. There are experiences more crippling to the human spirit than is pain, and one such experience is the haunting loneliness of emotional isolation.

One of the more common reasons given for avoiding or postponing the moment of truth is the desire to protect the well-being of the patient, the assumption being that telling him the truth may cripple his will to live or drive him into a depression that would sap his physical and emotional energies. The adequacy of this assumption is highly debatable. A bulletin from the Massachusetts Department of Public Health made this observation:

> "Those physicians and hospitals making a practice of telling the patients frankly when they have the disease (cancer) report only the fullest cooperation of the patient in his treatment. But the physician who lies to his patient denies him a chance to show his common sense and helps him one step nearer to the undertaker."[1]

One should acknowledge reports in which doctors tell of patients who have fallen into extreme depression and of some who have committed suicide upon learning of their disease. It is interesting to

note, however, that such reports usually use examples wherein the patient learned of his disease either quite accidentally or through someone who was in no position to minister to the patient as a competent doctor might be expected to do. Perhaps the depression and despair were prompted not alone by the knowledge of the disease as such, but in addition by the relationship-shattering realization that he had been profoundly deceived by those who were, at that moment, most intimately related to him. Given some sensitivity, one can detect the impact that discovered deception has on a small child. It is hardly surprising, then, that an adult may despair when he detects deception in a critical life situation. Indeed, the discovery of an ultimately threatening truth, accompanied by a sense of emotional isolation, may be more than most human beings care to face. Certainly no doctor worthy of his profession would drop such news matter-of-factly or unfeelingly. In these cases the M.D. knows that he also functions in a ministerial capacity. He is not merely informing the patient of a physical fact; he is confronting the patient with the possibility of the final threat to his personhood.

The doctor is, of course, a key person in the solution of this problem—whatever the solution may be. We need, therefore, to remember that the doctor is also human. As such, the doctor is caught up in fears, anxieties and drives as fully as is the patient for whom he cares. After all, the doctor's goal of sustaining health and prolonging life is always frustrated, finally, by death. As one doctor candidly remarked, "Nature has meant that man should die, and in the end she will have her way." Does not such a realization create tensions within the spirit of those who minister through medicine? Does not this realization demand a broader context that can undergird the medical practice? Some lines from August Kasper, M.D., reveal the doctor's own humanity:

> "In medicine, death is certainly present. . . . Early in his training, the premedical student has learned to feel, see, probe, and even kill living things; by the time he is in medical school, he is ready to call human skeletons 'Max' or 'Agnes'; and he can slap a cadaver on the backside as if it were a window-display dummy. With pride, he will go with his fellows, reeking with death, to dine in public places where his conversation will horrify the squeamish, hurt the mourner, titillate the silly, and annoy almost everyone. Does it need to be said that this bravado is largely counterphobic? . . . The doctor is desensitized, not to death, but to the symbols of death such as blood, bones, corpses, and stench which disturb most people. . . . It is as if medical men had overcome a phobia and had then convinced others and themselves, that they had no basic inner fear."[2]

One can legitimately ask, it seems, whether the doctor is not ministering to his own needs if he prefers not to tell the patient the truth.

Perhaps the root problem can be stated in the form of a question: Is death to be seen as the final tragedy? If death is total extinction—the final obliteration of personality and meaning—then meaning itself is threatened, and despair courts us. Give certain existentialists the credit for seeing this with clarity. And if this is what death means, then what alternative do we offer to those who seek to deny death's reality and who try to cut themselves off even from consideration of death—yet, strangely, perhaps flirt with death in many relatively conventional ways? All this is to suggest that the question can be answered only within a certain faith stance. If persons have no resources with which to meet death and to hope for victory over death, then terminal illness drives to despair as would life itself. What, then, are the possibilities of an answer in terms of a stance that grows out of Christian faith and ethics?

IN SEARCH OF A STANCE

One option which can be defended might be called "the right to truth." Joseph Fletcher propounded this position with some consistency when he wrote:

> "The patient has the right to know the truth. We are morally obligated to pay others the rights due them. Therefore a doctor is obligated to tell the truth to his patient. He *owes* the patient the truth as fully and as honestly as he owes him his skill and care and technical powers."[1]

When Dr. Cabot rejected "benevolent lying" and got on "the water wagon of medical honesty," he reflected much the same position. Yet one cannot characterize his position as being "truth for truth's sake." For he rejected benevolent lying not because a truth-telling principle had grasped him, but because he discovered that deception undercut his goals as a medical man. He found that lying can lead to the shattering of relationships and the breaking of the bonds of human trust, without which the art of healing is indeed badly hampered if not crippled. At another point Professor Fletcher probes behind his principle of "the right to truth" when he asserts, "Truth-telling is essential to any personal, thou-thou, relationship; just as essential as love, agape, solicitude. . . . Trust and truth require and presuppose each other."[1] In this analysis Fletcher suggests moving beyond a legalism and toward an ultimate of love and respect for the individual as an individual.

Truth telling must always be subordinate to such an ultimate. This is not to belittle truthfulness as a significant virtue, nor is it an invitation to play fast and loose with honesty in human relationships. But "truth for truth's sake" is an abstraction which must be rejected because it can, and too often does, lead to an offense against the deeper law of love.

Another option is available for those Christians whose tradition stresses the active role of the sacraments in the great moments and crises of human life. In such traditions the physician is obliged in the name of charity to tell the patient or his near relatives of the danger of death, so that the patient may make those arrangements which he finds consistent with his spiritual and temporal welfare. Yet this is no hard and fast legalism, for most manuals on the morals of medical practice indicate that this duty, which is one of charity, would cease if the doctor could not give such a warning without "grave inconvenience." The general thrust in this stance is toward an open and honest relationship with the patient. That this should be considered an act of charity is easily understood in the Roman Catholic tradition, for such a warning on the part of the doctor implies that the faithful person will summon a priest so that the sacrament of anointing, accompanied as it is by confession, may be performed. Certainly a good deal of latitude and personal decision is still involved, since the doctor must evaluate the possibilities of "grave inconvenience," and in some diseases he can withhold the truth until rather late in the illness. In short, the doctor and the family actually make their immediate decisions on a basis which lies outside of the sacramental encounter itself.

In seeking for a Biblical basis or context on which to structure an answer, let us consider the implications of the commandment of love as viewed in the light of agape, Christian love, as the source of the Christian life. The assertion to be made is this: In illness, the truth should be shared with the patient, not so much for the sake of truth-telling as such, and not so much because the patient "has a right to know," but rather because such sharing is an act of love within the conditions of our human experience. The accent here is on *sharing* the truth, not on *telling* the truth. The word "sharing" has connotations of human relationships which strike at the core of the problem —a point to which we shall want to return.

THE NEW TESTAMENT states the heart of the Christian ethic in a variety of ways, the most common being the words of Christ, "You shall love . . . your neighbor as yourself." Or as John's Gospel puts it, "This commandment I give to you, that you love one another even as I have loved you." In THE DIVINE IMPERATIVE, Brunner states that the word *love* fully describes that which is good; yet he reminds us that one should not attempt to structure love into a principle as such. Every attempt at making love into a principle results, Brunner asserts, in some type of distortion of love. Here Brunner strains away from all legalisms, since they undercut the two major Reformation themes of grace alone and faith alone. Love is not *of* us or *by* us, but of God and hence *through* us. The New Testament faith gives us, not a principle, but a perspective and a power. The Christian moral life, then, grows out of Christian faith—out of a life lived in Christ. So the "good" is not a matter of moral endeavor, a kit of do-it-yourself ethical injunctions. Rather, the good is God's gift and God's work; it is the fruit of the new life in Christ.

The brief paragraph above is an attempt to state succinctly the faith stance out of which an answer to our question may grow. Let us look at it this way: In Christ, by God's grace, we are freed (saved) from guilt and death and meaninglessness. We are also freed to love—to love in all the circumstances of living and dying, as Christ loved us in living and dying. Then, being freed from the anxiety which death presses upon us, whether as physician, loved one, or patient, we love those who are dying by sharing in their life and in their death. This is "bearing one another's burdens" by which we "fulfill the law of Christ" which is love. The suffering and pain involved in such sharing are, to be sure, quite real; but they are accepted and transformed and sanctified.

Such a stance points to the communal nature of Christian ethics. Christian life is life in the community, out of the community, and for the community. Thus one who is dying is intimately tied to the community. He is not isolated because of his condition, but enfolded and strengthened in his faith and hope. In this manner the Church, as a community of believers, consecrates all the high points of our existence: birth, the hearing of the gospel, marriage, and finally, also, death. Thus we *share* the truth with those who are dying, not because we are committed to the "truth" as such, or to "the right to know" as such, but because out of God's love we have learned to love and to hope, and we share such love and hope with those most deeply in need. St. Paul put it once in a different way, "Rejoice with those who rejoice, and weep with those who weep." This, Paul seems to assert, is what it means to live as a man and to die as a man—a man in Christ. And what is this but to be human together, as God through Christ bids us and empowers us to be.

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Report to the Membership From the Speaker of the IMS House of Delegates

PAUL M. KERSTEN, M.D.
Fort Dodge

Now that the 1966 Annual Meeting of the Iowa Medical Society has adjourned I should like to report to you, the members, on the representation or lack of it which your delegates afforded you at each of the House of Delegates sessions. Before I do so, I think I should briefly review the organizational structure of our very democratic Society.

Figure 1 is a diagram of the organizational structure under which we operate. It is quickly apparent that the most important body in our Society is the House of Delegates. The House is the policy-making, elective and legislative branch of the Society, and all other divisions are answerable to it. It follows that, at least from the point of view of our having ourselves adequately represented on the state and national level, the most important job in any county society is that of delegate (and/or alternate delegate) to the IMS House of Delegates. Ultimately, all authority in the Iowa Medical Society rests with this elected body. In the main, it is from this House of Delegates that outstanding men are chosen to fill the elective and the appointive positions of the Iowa Medical Society.

The main work of the Iowa Medical Society is done by the House of Delegates. Customarily, the House holds two sessions at the time of each IMS annual meeting. At the first session, usually on Sunday, the first day of the annual meeting, the House meets as a Committee of the Whole to consider reports from all the appointed and elected subdivisions. Each report is referred by the Speaker to an appropriate Reference Committee for study. Furthermore, at the first session of the House, all resolutions which have come to it through the delegates from the various county medical societies are presented and likewise are referred to appropriate Reference Committees.

Reference Committees are made up of delegates from the various county medical societies. These Reference Committees hold open hearings at which every interested member of the Society is privileged to speak. The Reference Committees then evaluate all resolutions from county societies, as well as committee reports and reports of officers. Reports are prepared by the Reference Committees and are presented during the second session, at which the House meets again as a Committee of the Whole for debate, acceptance, or rejection—or modification leading to acceptance or rejection of the various Reference Committee reports. In this most democratic and orderly way, the wishes of the membership of the entire Society are expressed by the elected delegates.

DELEGATES AND ALTERNATES HAVE SPECIFIC TASKS TO DO

It is essential for the constituent county medical society to send qualified men as their representatives. The delegates and alternate delegates should have broad general backgrounds in current medical problems. Even more importantly, they should be willing to work, and should be able to work effectively with their colleagues. They should be willing to invest the needed time and energy in Reference Committee activities. Particularly if they haven't been assigned to sit on one or another of the Reference Committees, they should regard it as their duty to attend the hearings of the Reference Committees so as to speak on the resolutions that have been submitted by their respective county medical societies. If the delegate from a society is a member of a Reference Committee, the *alternate delegate* should be prepared to represent his organization at such Reference Committee hearings. It is only in this way that a particular Reference Committee is enabled truly to understand the thoughts and wishes of the county medical societies from which resolutions have come. All too frequently the delegates or alternates default this responsibility, and therefore fail to adequately represent you, the electorate.

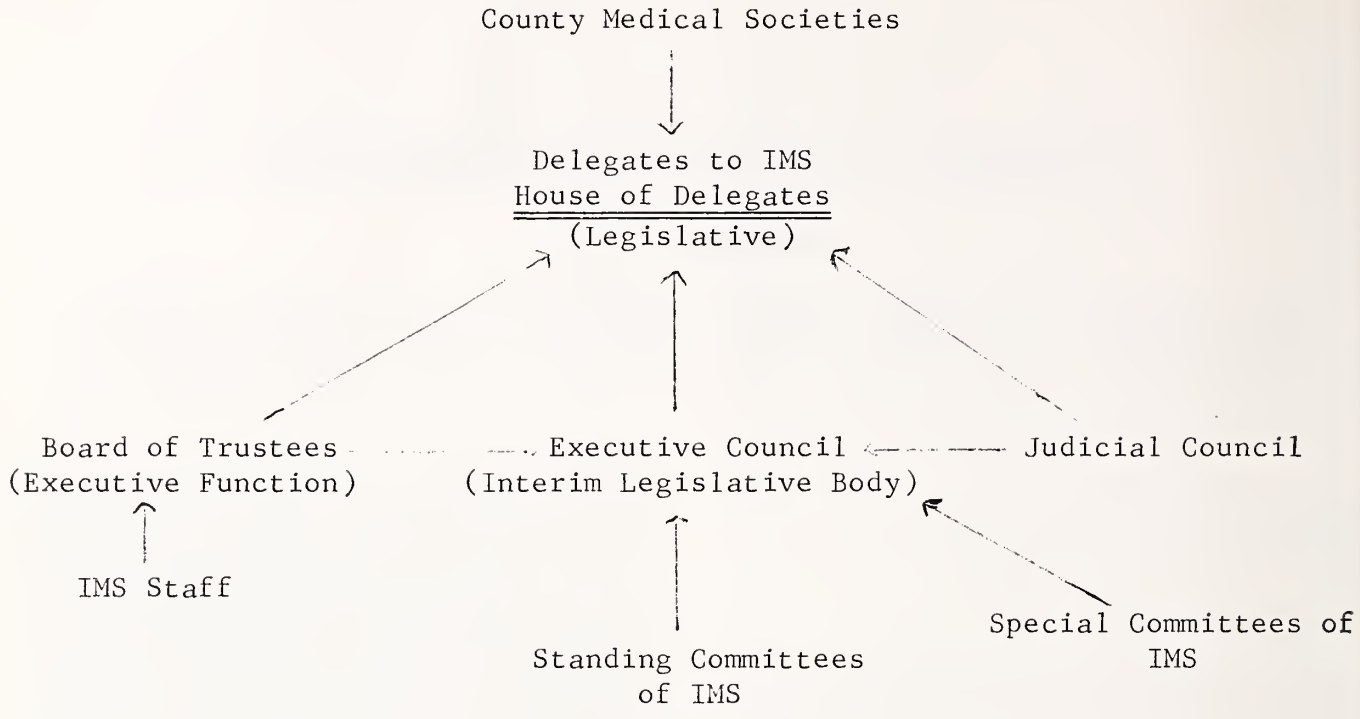


Figure 1

Delegates should be willing to serve on the Reference Committees themselves. The By-Laws of the Society provide that the Speaker, with the advice of the Secretary, shall appoint the Reference Committees. Appointments are made from among those delegates who are thought to be most effective and most capable of handling this responsibility. Generally, the chairman of a given Reference Committee has served previously as a Reference Committee member. Unfortunately, however, it is not uncommon for a significant percentage of those delegates to refuse to serve. Clearly, this default on the part of a delegate is a clear disservice to the county society which elected him, and it certainly acts against the best interests of the parent society. To the extent that delegates cannot or will not work, to that extent their society is inadequately represented. Certainly organized medicine cannot afford this.

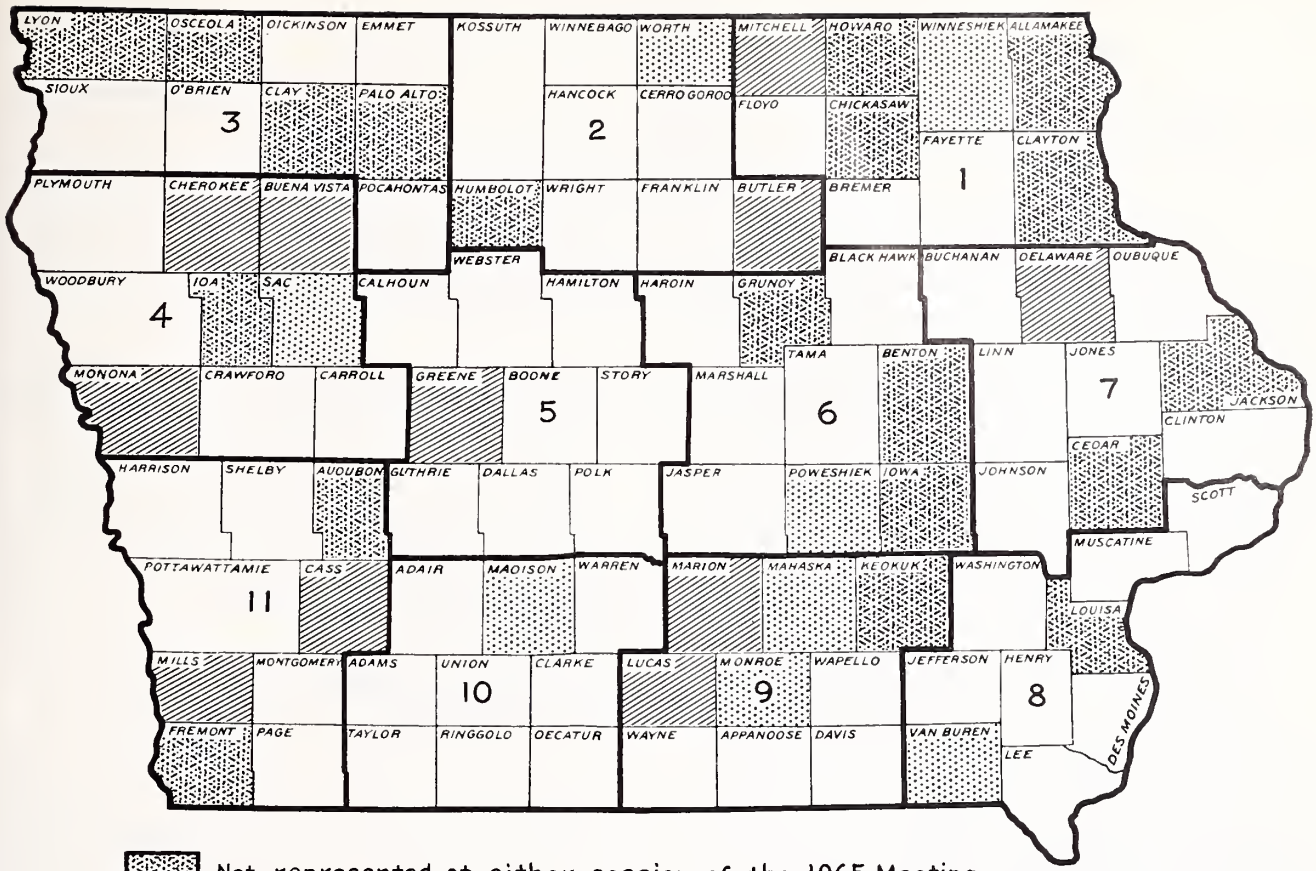
It is a distinct honor to be asked to serve on a Reference Committee, and particularly to assume the position and responsibility of chairman, for such an invitation implies a recognition that the doctor not only is knowledgeable but is able to think clearly, speak effectively and write concisely. The chairman must prepare his Committee's report in such a way that it will be altogether clear to the House of Delegates, and he must read it and defend it before the House, meeting as a Committee of the Whole.

For these reasons, as I have said, the most important job in any county medical society is the job of delegate to the House of Delegates of the Iowa Medical Society, and it behooves us to choose these representatives thoughtfully and wisely if our wishes are to be presented effectively. It is important, moreover, for a county medical society to send good men back as delegates year after year, for only by that means can they become proficient as representatives. It is in this way, too, that a county society expresses its confidence in and support of such men. Then in turn, as I have also said, the State Society chooses particularly effective doctors from among the delegates for further work on a state level and ultimately on the national level.

ONLY THOSE WHO CAN AND WILL WORK SHOULD BE CHOSEN

Not only do we, as the electorate, have a responsibility to choose competent people as our elected delegates, but the elected delegates themselves have a responsibility to represent their county medical societies effectively and completely at the House of Delegates sessions. If for one reason or another they cannot, they should resign and step aside for physicians who are better qualified or better motivated to do the job. The vitality of the IMS rests on the shoulders of the delegates!

Figures 2 and 3 graphically present the degree of representation given by delegates from the constituent Societies. They are self-explanatory. If there is any shading over the area circumscribed by a given constituent society, that society was either only partially represented, or not represented at all, at the 1965 and/or 1966 meetings of

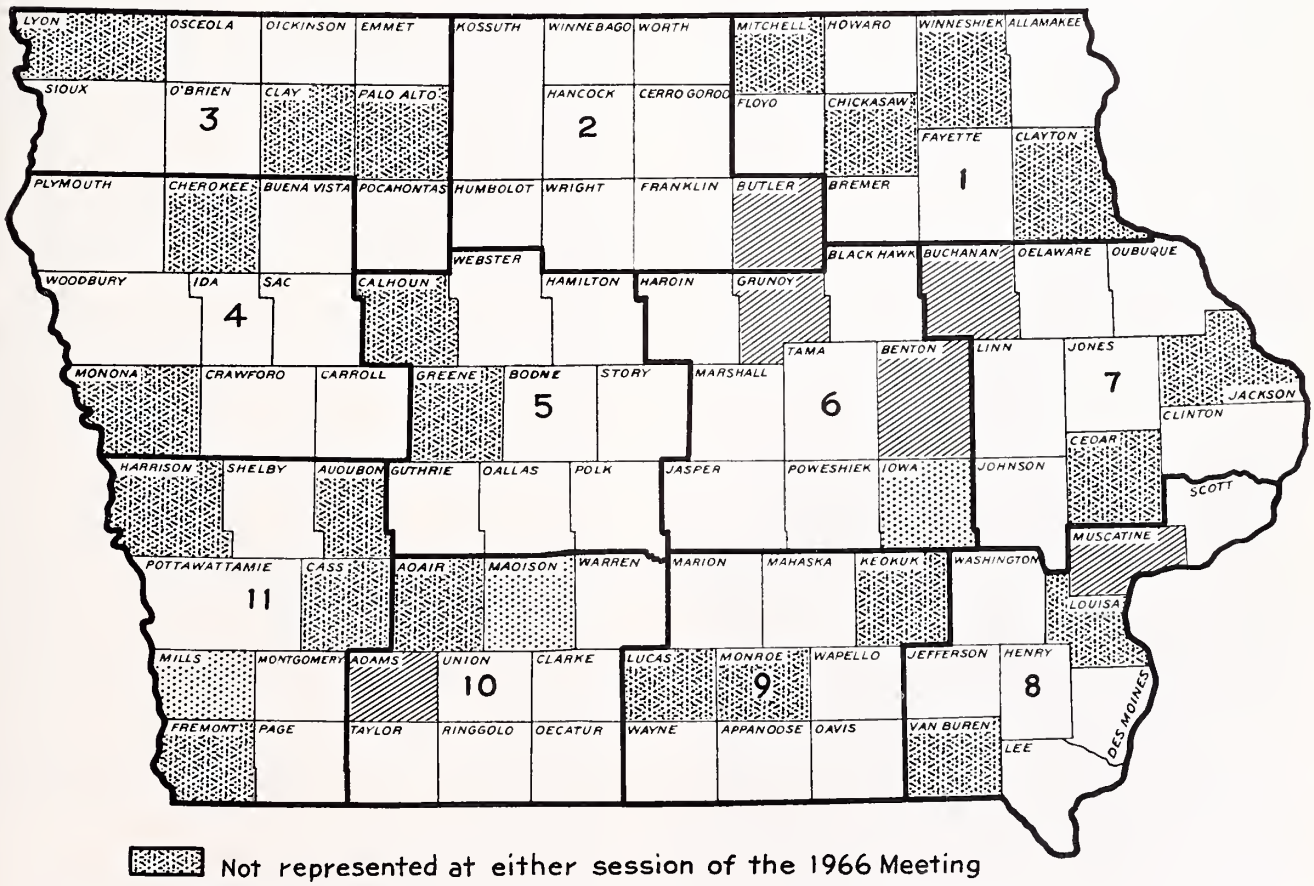


Not represented at either session of the 1965 Meeting

Not represented at the first session of the 1965 Meeting

Not represented at the second session of the 1965 Meeting

Figure 2



Not represented at either session of the 1966 Meeting

Not represented at the first session of the 1966 Meeting

Not represented at the second session of the 1966 Meeting

Figure 3

the House of Delegates. The larger demarcated areas represent the 11 councilor districts into which the state is divided.

CONCLUSION

For the future, it is imperative that constituent societies choose delegates who can be re-elected for a considerable number of consecutive years, and that future delegates be groomed by serving initially as alternate delegates. In addition, it is essential that the constituent county medical societies send delegates who are knowledgeable, interested, energetic, effective at speaking and writing, and capable of working effectively with their colleagues, and who are willing to invest their energies toward meeting the needs of organized medicine.

Measurement of Depression

"The Measurement of Depression" is a 16 mm. sound and color motion picture depicting the development, validation and quantitative measurement of depression, and is intended for showings at hospital-staff, county medical society and specialty society meetings. An accompanying scale for the quantitative measurement of depression was designed by Wm. W. K. Zung, M.D.,[1] a Durham, North Carolina psychiatrist. Although initially devised for use in psychiatric research, it readily lends itself to the general practice of medicine, where most depressions are first encountered. Copies of the self-rating scale, available in quantity for use in office practice, come complete with full instructions. The film can be borrowed, and pads of the self-rating scale are available free, from Lakeside Laboratories, Inc., Milwaukee, Wisconsin 53201.

The scale consists of 20 statements expressed in the common language of the patient. The statements comprehensively delineate widely recognized symptoms of depression, including disturbances of mood, and of biological and psychological function. Testing and scoring patients usually requires less than five minutes. Statistical studies indicate that measurements so obtained correlate reliably with other more time-consuming depression-rating scales in current use.[2]

Use of the scale in a variety of patients with physical complaints without apparent organic basis may uncover and measure depression, thus sparing the physician the necessity of conducting several probing interviews. Surveys published in J.A.M.A.[3, 4] have indicated that approximately 50 per cent of all medical and surgical patients have illnesses that are primarily emotional, and that of those, over one-half are depressive. Depression is a condition of paradox and contradiction. It is sometimes a self-limiting disease with a duration of six to 18 months, but it may persist for years. It may be obvious, or hidden from the patient and from the physician.

The depressed patient's grasp of reality usually appears to be undistorted. Even so, suicide makes it necessary to classify depression as a potentially fatal disease. Depression is today's most common and most challenging diagnostic problem, in psychiatry as well as in general practice.[5] Despite its high incidence and despite the fact that much is known about it, the diagnosis of a case of depression often requires from months to years.[4]

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Fifteenth Edition of Pediatrics Academy "Redbook"

Oral poliovirus vaccine (OPV) is the most effective immunization procedure for the prevention of polio in children, and should be used in community-wide vaccination programs and for routine immunizations in infancy and childhood. This recommendation and other recommended procedures for immunization against diphtheria, tetanus, whooping cough, measles and smallpox appear in the newly-revised 15th edition of THE REPORT OF THE COMMITTEE ON THE CONTROL OF INFECTIOUS DISEASES, which was released on June 30, 1966, by the American Academy of Pediatrics.

The report, also called "the Redbook," points out that inactivated polio vaccine (IPV) is also effective, but that oral polio vaccine has a clearcut superiority "from the point of view of ease of administration, immunogenic effectiveness, protective capacity and potential for the eradication of poliomyelitis."

"The Redbook" emphasizes the need for initiating immunization procedures against diphtheria, pertussin and tetanus at between two and three months of age. Three doses of DTP vaccine should be administered at four- to six-week intervals, along with monovalent or trivalent oral polio vaccine. A fourth dose of DTP and trivalent oral polio vaccine should be given one year later, and another dose of DTP should be administered at three years of age. Thereafter, pertussis vaccine is no longer given, but tetanus and diphtheria boosters are repeated at six and 12 years of age. The report also recommends that children ready to enter school should again receive a single dose of trivalent polio vaccine.

Initial vaccination against smallpox should occur sometime between 15 and 18 months of age, during a relatively cool season, and should be repeated at ages six and 12 years.

"The Redbook" may be obtained from the Academy's headquarters, 1801 Hinman Avenue, Evanston, Illinois 60204, for $1.50.

Scientific Articles

Diagnosis and Treatment of Respiratory Acidosis

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IT SEEMS LOGICAL to consider the systemic arterial blood for evidence of failure in chronic obstructive airway disease, since the function of the lungs is to exchange gas between inspired air and the blood passing through the lungs. The relation of respiratory failure to hypoxemia with hypercapnia is my primary interest in this paper.[1]

Alveolar hypoventilation with respiratory failure produces a decrease in the partial pressure of oxygen and an increase in the partial pressure of carbon dioxide in the arterial blood. Respiratory acidosis is an alteration in the acid-base status produced by retention of carbon dioxide. Retention of carbon dioxide overloads the normal buffer mechanism, producing a drop in the pH of the blood and a state of acidosis.

CAUSES

The most significant cause of carbon dioxide retention is hypoventilation owing to chronic obstructive airway disease, which includes chronic bronchitis and emphysema. In a dyspneic patient, a common cause of acute respiratory acidosis is depression of the respiratory center from excessive narcotics. In a patient with chronic pulmonary disease who is ventilating poorly, acute respiratory acidosis may be precipitated by the administration of high concentrations of oxygen. Interference with the nerve pathway from respiratory center to muscles of respiration, diseases of respiratory muscles, deformities of the thorax, diseases limiting motion of the thorax, and defects of the diaphragm—all of these can produce the clinical picture of alveolar hypoventilation. Thin as well as obese people, though they have normal lungs, may underbreathe chronically, and as a result may develop hypoventilation, hypoxia, and cor pulmonale.[2, 3]

In a case of idiopathic hypoventilation, it is important to hyperventilate the patient so as to determine whether he is able to restore normality to the oxygen saturation and partial pressure of carbon dioxide in his arterial blood ($paCO_2$). This procedure excludes hypoventilation of central origin from the conditions that are due to lung disease. It remains to exclude a right-to-left shunt as the cause of the hypoxemia, and one can do this by noting a rise in partial pressure of oxygen in arterial blood (paO_2) when the patient breathes pure oxygen.

DIAGNOSIS

The most easily recognized symptoms of respiratory acidosis are anxiety, restlessness, apprehension and irritability. Later, as the condition progresses, confusion, somnolence, stupor and coma develop.

When one first examines a patient with hypoventilation, it is imperative for him to have laboratory guidance as to the severity of the alveolar hypoventilation and respiratory acidosis.

The Astrup method[4] has been valuable to me in defining the acid-base alteration. Determinations at frequent intervals aid in evaluation of therapy and progress. The Astrup method measures the pH, pCO_2 and bicarbonate levels, and constitutes a reliable guide as to the severity of the respiratory acidosis and as to the need for tracheostomy.[5]

Dr. Dines is a staff member in the Section of Medicine of the Mayo Clinic and Mayo Foundation.

It can be helpful also in defining a metabolic alkalosis superimposed on a respiratory acidosis due to hypokalemia from digitalis and diuretics.

TREATMENT

In many cases, treatment of respiratory acidosis is on an emergency basis. Once a patient becomes unconscious or drowsy, his cough becomes inadequate, his secretions puddle, and his ventilation is further embarrassed. Intermittent positive pressure is necessary as a means of hyperventilating the patient. If the patient is too drowsy to participate, an anesthesiologist should intubate the trachea with an endotracheal tube. If there also is a secretion problem, or if the patient will require ventilation for a prolonged period, tracheostomy must be contemplated. If tracheostomy is performed, a cuffed tube is put in place and is connected to the respirator for artificial hyperventilation.

The next most important part of the treatment is to raise the blood pH by the buffering of sodium bicarbonate. A consistent rise in pH and comparable improvement in the level of consciousness have been achieved by the intravenous injection of 100 mEq. aliquots of sodium bicarbonate. Either lactic-acid acidosis due to hypoxia, or depression of renal hydrogen-ion secretion and bicarbonate formation seems to be the fundamental defect accounting for the failure of the buffering systems to compensate for the rising carbon dioxide tension.[6] The blood pH should be raised above 7.2 by the intravenous administration of bicarbonate, and progress should be monitored by periodic determinations of pH and pCO_2. If the arterial oxygen tension cannot be maintained above 40 mm. Hg, or if the pH cannot be kept above 7.2, then respiratory assistance is mandatory.

Treatment should include nebulization with aerosol bronchodilators, using isoproterenol hydrochloride (Isuprel) 1:200, four times daily, given by intermittent positive pressure or air compressor.[7] Aminophylline, 0.5 Gm. administered intravenously over six to eight hours, is a bronchodilator as well as a respiratory stimulant. Expectoration can be achieved by the intravenous use of sodium iodide, 1.0 Gm./liter in the unconscious patient, or by oral doses of potassium iodide if the patient is responding and is tolerating oral fluids.

Haemophilus influenzae and Diplococcus pneumoniae are the commonest organisms in the sputum.[8] Until cultures and sensitivity studies have been completed, a patient with respiratory failure resulting from chronic obstructive airway disease can be treated with tetracycline. A high intake of fluids is extremely important as a means of keeping secretions loose and assisting expectoration. Humidity can be increased by means of a heated nebulizer and Mist O_2 Gen.

The most ominous sign in the course of respiratory acidosis is the development of peripheral vascular collapse due to coexisting metabolic acidosis (lactic-acid acidosis) from anoxia.[9] Once peripheral vascular collapse develops, recovery is rare. Oxygen (in a 30 to 40 per cent concentration) is necessary to correct the deficiency that results from hypoventilation. If depression of ventilation ensues, as indicated by a rising pCO_2 and a falling pH, mechanical ventilatory assistance is necessary. Oxygen can be administered safely to patients with respiratory failure as long as reliable arterial pH, pCO_2, and pO_2 or oxygen-saturation studies are immediately available.[10-12] It is imperative to raise the pO_2 in the arterial blood to 50 mm. Hg or more, an amount which corresponds to an 80 per cent oxygen saturation in the blood. The proper concentration of oxygen is the lowest that will raise the pO_2 to the safe level of 50 mm. Hg—usually 30 per cent oxygen in the inspired air.[13]

SUMMARY

Logically, in cases of failure due to chronic obstructive airway disease, the systemic blood should be studied, since the function of the lungs is to exchange gas between inspired air and the blood that is passing through the lungs. Hypoxemia and hypercapnia are relevant conditions, and the Astrup method for determining pH, pCO_2 and bicarbonate values has been found valuable.

Principles of management are important. The essential aim of oxygen therapy is to keep arterial oxygenation above the damaging levels of hypoxemia.

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Preoperative Evaluation of The Surgical Patient

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Davenport

PREOPERATIVE EVALUATION may vary from a few minutes of rapid, though careful, preparation for an obvious surgical emergency to many days of careful, systematic evaluation preceding an elective or semi-elective operation.[48] During surgery, the cardiovascular, renal and bronchopulmonary tissues are the primary areas of the body under stress. However, the endocrine organs and the liver are not exempt.[7] An adequate history and physical examination must be performed[43] and should be no less complete than in a medical diagnostic problem. The stress areas will be discussed first, and then general factors in preoperative evaluation will be mentioned.

PREOPERATIVE CARDIOVASCULAR EVALUATION

The internist is frequently called upon to give a "cardiac clearance" for a surgical patient, but it must be emphasized that cardiac status is neither more nor less important than evaluation of the pulmonary, renal, neurologic, metabolic or hormonal functions, and overemphasis on any one of them may lead to disaster.

In the evaluation of the pre-surgical patient, the most important findings in the patient's history in relation to cardiovascular status include dyspnea, angina, paroxysmal nocturnal dyspnea, acute coronary insufficiency and myocardial infarction. One must know the patient's mode of living and his response to ordinary activity and simple exercise, and one must question him as to the status of his peripheral circulation, both arterial and venous. Arterial insufficiency is markedly aggravated by hypotension, and venous difficulty, of course, may cause thromboembolic episodes.

On physical examination, the most significant findings include enlarged heart, valvular murmurs, gallop rhythm and other important disturbances of cardiac rhythm.

A 12-lead electrocardiogram should be performed,[7] but this may be normal or borderline in many patients who have significant valvular, coronary-artery or myocardial disease. A single or double "master two-step" may be indicated in the questionable cases of coronary-artery disease. The electrocardiogram is of value in checking heart size, rhythm, and electrolyte imbalance, for frequent auricular or ventricular premature beats and tachycardia may be the only clues to an underlying myocardial disease, with the latter two of special significance in incipient cardiac failure. A chest x-ray is indicated not only to measure heart size but also to check the lung fields.

In evaluating the patient for non-cardiac surgery, three major points should be kept in mind:[3] (1) Be sure of the diagnosis. Is heart disease simulating a surgical abdomen, such as with an acute coronary, acute pericarditis, acute hepatic congestion or an embolism? Or is a surgical problem such as gallstones, peptic ulcer or hiatus hernia causing symptoms resembling those of heart disease? (2) The cardiac prognosis must warrant the risk of surgery. If the patient has a very limited life expectancy from his cardiovascular disease and if the surgery is elective, then an alternative form of treatment should be chosen if possible. Surgery, however, may aid even the serious cardiac. For example, surgical correction of hyperthyroidism or prostatic obstruction, and even occasionally a cholecystectomy, may give relief from symptoms of angina or a cardiac arrhythmia. (3) There must be an adequate estimation of the cardiac risk.

Certain cardiac problems are felt to contraindicate major surgery:[6] (1) a myocardial infarction within three months; (2) congestive heart failure; (3) uncontrolled arrhythmia; (4) active myocarditis; (5) pericarditis; (6) subacute bacterial endocarditis. Certain other cardiac problems must be regarded as marked operative hazards because of the patient's predisposition to arrhythmia or shock. Some examples are: (1) coronary disease or angina; (2) marked cardiac enlargement; (3) heart block and Stokes-Adams syndrome; (4) chronic cor pulmonale; and (5) paroxysmal nocturnal dyspnea. If surgery is needed despite the grave cardiac risk, then great care should be taken to

Dr. Larson and Dr. E. A. Motto, the author of the paper which follows this, are private practitioners of internal medicine. They made their presentations at the 1966 Annual Meeting of the Iowa Medical Society.

prevent hypoxia, hypotension, circulatory overload, preoperative tension and deep anesthesia.

Only 15 per cent of the deaths in cardiacs occur during or within 24 hours after surgery. The high mortality occurs from increased postoperative complications such as pneumonia, wound infection, congestive heart failure, pulmonary embolism and other cardiovascular complications. The morbidity and mortality are increased in intrathoracic and intra-abdominal surgery, whereas transurethral resections, hernia repair, eye, ear, nose and throat surgery, and local proctologic procedures seem to be well tolerated.[49]

In an evaluation of 857 surgical operations,[49] it was found that myocardial reserve is the most significant factor in postoperative recovery. The following results were noted, using the New York Heart Association classification: (1) Class I (no limitation of activity)—4 per cent mortality; (2) Class II (patients able to climb a flight of stairs or walk three blocks)—11 per cent mortality; (3) Class III (patients unable to climb a flight of stairs or walk three blocks)—25 per cent mortality; and (4) Class IV (patients with cardiac symptoms at rest)—67 per cent mortality.

Hypertension. Hypertension has a variable effect on surgical risk. Uncomplicated hypertension has little effect on a patient's ability to stand surgery, but malignant hypertension markedly increases the risk.[25] The patient with hypertensive cardiovascular disease has increased risk, and elevated blood pressure during surgery must be avoided in those patients who also have coronary heart disease or a history of heart failure. It is recommended that anti-hypertensive drugs be continued in the severe hypertensive, but they may be withdrawn in the mild. As a general rule, anti-hypertensive drug therapy should not be withdrawn in patients with pre-treatment diastolic levels of 120 mm. Hg or above.[37]

Rheumatic Heart Disease. Patients with rheumatic valvular heart disease, like those with noncyanotic congenital heart disease, seem to have little increase in cardiac risk, if they are well compensated.[3] Congestive heart failure markedly increases the hazard, however. Rheumatic heart disease allows greater tolerance of intrathoracic and intra-abdominal surgery than does arteriosclerotic heart disease.[1, 49] The risk in a patient with auricular fibrillation and enlarged heart and mitral stenosis is no greater than the risk in a patient with rheumatic heart disease and auricular fibrillation alone. Or saying it in another way, the risk with combined factors is the same as the risk with the single most important factor.[1]

Degenerative Cardiovascular Disease. Degenerative cardiovascular disease is found in 70 per cent of patients over the age of 70,[4] and is the leading cause or a contributory cause of death following surgery. Adequate preparation seems to reduce the risk, for emergency surgery in this age group has a death rate three to four times higher than that in elective surgery. In this particular age group, a bundle branch block, an old healed myocardial infarction and auricular fibrillation seem to increase the mortality rate but little.

Coronary Disease. Evaluation of the patient with coronary disease requires an accurate diagnosis, for the surgical risk is two to three times greater for such an individual than for the general population.[36] The evaluation of risk in coronary disease varies with the situation: (1) Patients with angina and normal rest and exercise electrocardiograms present approximately the same risk as other patients of equivalent ages. (2) Patients with angina and abnormal electrocardiograms are subject to arrhythmias or thrombotic occlusions that are often fatal. (3) Patients with angina decubitus are as poor surgical risks as those with acute myocardial infarctions. (4) Patients with myocardial infarction have an overall risk that is eight times the average. The risk to the individual patient varies in inverse proportion to the length of time that has elapsed since his infarct. Elective surgery during the acute stage of infarction is unjustified, since the surgical risk is extremely great. Elective surgery following recovery from infarction may be undertaken if three to six months have passed since the coronary occlusion. After two years, the incidence of an infarct following surgery is no greater for such patients than for the general population.

Asymptomatic or occult coronary disease results in a myocardial infarction rate of 2.4 per cent in patients below the age of 50, and 4.5 per cent in those above the age of 50. Half of these would be missed without the routine postoperative electrocardiogram.

Digitalis. Three clinical situations call for the use of digitalis:[29] (1) the prevention or control of paroxysmal ectopic arrhythmias of atrial or nodal origin; (2) the reduction of A-V conduction in atrial flutter or fibrillation; and (3) a need to increase the ventricular contractility of the failing heart.

Normally, in the absence of symptoms, myocardial insufficiency, hypertension, cardiac enlargement, organic valvular disease, premature beats, electrocardiographic changes of myocardial damage, preponderance of either ventricle, coronary-artery disease or advanced age with normal cardiac reserve does not constitute an indication for digitalis.[2] Increased numbers of patients with cardiac disease are being digitalized prophylactically, however, during the preoperative period, for recent evidence indicates that digitalis may aid the diseased myocardium, whether congestive failure is present or not.[38]

Digitalis should be given preoperatively to patients not in failure if they have exhibited cardiac dyspnea on moderate exertion, or if they have experienced paroxysmal noctural dyspnea.[2] Even

without symptoms of myocardial insufficiency or regardless of the cardiac rate, all patients with auricular flutter or fibrillation should be completely digitalized preoperatively. These patients tolerate surgery well; but anoxia, hemorrhage, shock or postoperative complications may cause increased ventricular rates with cardiac decompensation.[2] A given amount of exercise causes a much greater rise in cardiac rate in patients with auricular fibrillation than in patients with normal rhythm. Routine digitalization is also recommended for patients with cor pulmonale and Stokes-Adams syndrome,[6] and the latter should receive Ephedrine or Atropine every four to six hours.

GENERAL FACTORS INCREASING THE RISK OF THROMBOEMBOLIC DISEASE

Increased age, overweight, pre- and postoperative immobilization, deep anesthesia and previous operations all increase the risk of postoperative thromboembolic disease.[31] Patients should not be hospitalized for study, diagnosis or rest prior to surgery. These studies should be performed on an outpatient basis, while keeping the patient active. Decompression of the obstructed bladder to lower the BUN should be carried out at home, with the patient ambulant. Preoperative immobilization is the single most important hazard as regards postoperative thromboembolic disease. If surgery must be done in spite of a high probability of thromboembolism, then a pulsating boot should be used to reduce the hazard.

EVALUATION OF RENAL FUNCTION

Altered renal function is a very difficult thing to detect on the basis of a patient's history. However, those patients who fall into any of the following categories should be assumed to have a definite decrease in renal reserve, and special efforts should be made to correct anemic states, avoid excessive preoperative medication, guard against even minor hypoxic or hypertensive states, and restrict operations to the essentials.[7] The categories are: (1) obstructive lesions of the urinary tract in an elderly patient; (2) history of recurrent cystitis or pyelitis; (3) recent severe or debilitating illness; (4) prolonged severe dehydration; (5) shock, due to any cause; and (6) overt chronic nephritis. A question of renal function should also be raised with major degrees of hypertension, a history of coronary-artery or cerebral-vascular disease, or of diabetes, for the surgical risk is directly proportional to the decrease in renal function.[6] Surgery is also poorly tolerated by patients with acute glomerular nephritis or the nephrotic syndrome.[6]

In the laboratory evaluation of renal function, a simple urinalysis is still the best and simplest of the renal-function tests. A random urine showing adequate concentration (1.018 or more), or showing adequate dilution (well under 1.010) is a good indication of an adequately functioning kidney.[7] Of necessity, a urine specimen must be fresh to show casts, red cells and white cells. If more than a trace of albumin is present, renal function should be checked out. Any blood urea nitrogen over 20 mg. per cent must be viewed with suspicion and verified. When there is any question of adequate renal function, a urea clearance, a PSP test, a water concentration test and an intravenous pyelogram should be performed.[7] A PSP excretion of less than 20 per cent in one hour, or a urea clearance which is markedly impaired (30 per cent), or a creatinine clearance of less than 40 per cent indicates severe renal damage that may cause increased morbidity or mortality.[6]

Even though renal failure increases the hazards of most surgical procedures and increases the risks of anesthesia, chronic dialysis may be used to prepare even the most severely uremic patient for major elective surgery.[40]

RESPIRATORY EVALUATION

In an examination of the respiratory system, it is particularly important to look for emphysema, which causes an increased incidence of operative and postoperative morbidity and mortality[32] due to an increased incidence of atelectasis and postoperative pneumonia.[6] These patients are, in fact, rather poor surgical risks. Accurate evaluation can be difficult in the absence of a pulmonary-function laboratory, but a number of clues are available on the routine physical examination:[10, 21] (1) An accentuated pulmonary second sound after the age of 40 means pulmonary hypertension, and further study is indicated. (2) Decreased diaphragmatic excursions demonstrated by percussion at the pulmonary bases in the inspiratory and expiratory positions, and/or diminished intensity of the heart sounds over the lower sternum is indicative of pulmonary emphysema. (3) Terminal wheezes at the end of maximal expiration are a reliable sign of obstructive pulmonary disease. (4) A localized patch of persistent rales is often evidence of an area of bronchiectasis. (5) A brisk walk down the corridor or up a flight of stairs may elicit dyspnea, cough or wheezes not present at rest. (6) An acute upper-respiratory infection is a contraindication to nonemergent surgery. (7) A history of smoking one or more packs of cigarettes a day is a safe indication of chronic bronchitis.

Certain factors predispose the surgical patient to postoperative bronchopulmonary complications. These can be divided into two groups:[21] (1) preexisting conditions such as chronic bronchitis, bronchiectasis and pulmonary emphysema; and (2) conditions relating to the surgical procedure itself or to the preparation for it—(a) use of nasogastric or nasointestinal tubes for more than 36 to 48 hours preoperatively, (b) casts or dressings

limiting respiratory excursions and effective coughing, (c) poor pain tolerance requiring heavy analgesia, (d) undue responsiveness to preoperative sedation, (e) surgical procedures requiring more than one or two days' bedrest, with resultant splinting of the chest wall against the bed, (f) surgical procedures commonly followed by a major degree of ileus, and (g) surgery on the upper abdomen. Respiratory complications follow abdominal surgery in 18 per cent of males and 8 per cent of females, but there are such sequelae in only 1 per cent of patients following other types of surgery. The duration of the operation, in abdominal procedures, is more important than the anesthetic. There is a respiratory complication rate of 5 per cent following abdominal surgery lasting less than 30 minutes, and a complication rate of 40 per cent for patients undergoing surgery over 90 minutes in duration.

Although selected patients will require detailed pulmonary-function studies, the maximal breathing capacity is the single most valuable preoperative test for detecting the presence of emphysema.[18] When combined with the three-second timed vital-capacity test, it provides excellent screening of pulmonary function.[27] For example, in thoracic surgery less than half of the patients with maximal breathing capacities below 50 per cent will survive surgery unless that surgery is aimed specifically at correcting a mechanical problem that has inhibited breathing.[24] Death or confinement because of pulmonary insufficiency will be the most common result for patients with a maximum breathing capacity of less than 55 per cent who must undergo a pneumonectomy. It must not be forgotten, however, that the anesthesiologist can carry a patient through urgently-needed surgery, even if his vital capacity and maximum breathing capacity are very low.[24]

The patient with pulmonary tuberculosis constitutes an increased risk, for anesthesia and surgery increase the hazard of reactivation, dissemination and clinical progression of his disease.[33]

The asthmatic patient must be carefully evaluated, for asthma may be a contraindication to the use of pentothal, cyclopropane and morphine.[6] Elective surgery should be planned, if possible, to take place during periods of remission. When residual wheeziness and cough are present, it may be advisable to use 10 drops of potassium iodide three times daily, accompanied by a discontinuance of smoking. The moderate asthmatic should be hospitalized in a private room, should avoid all respiratory irritants, and should receive potassium iodide, fluids, oral bronchodilators and a nebulized aerosol. As a general rule, if an asthmatic can lie flat in bed all night without coughing or wheezing, he is ready for surgery.[23]

Procedures for the treatment of postoperative complications can be used much more effectively *before* surgery to prevent morbidity and mortality. Increasing their ventilatory capacity will aid patients with chronic bronchopulmonary disease. This is accomplished by postural drainage, breathing exercises, and intermittent positive-pressure breathing with bronchodilators, nebulizers and detergent aerosols.[19, 20]

EVALUATION OF THE ENDOCRINE GLANDS

The basic history and examination will uncover most common diseases of the endocrine glands.

Diabetes mellitus.[22] Preoperative detection and control of diabetes mellitus is essential to safe surgery. The dose of insulin on the day preceding surgery should be slightly decreased so as to lessen the chances of hypoglycemia. Also, surgery should be scheduled early in the morning, so that the diabetic routine is interrupted as little as possible. In unstable diabetics, short-acting insulin should be used on the operative day. Oral antidiabetic agents may be discontinued several days before surgery, or the patient should be given adequate glucose until he is able to eat.

Thyroid.[6] Uncontrolled hypothyroidism is a contraindication to surgery because of the danger that vascular collapse may occur during surgery and that cardiovascular complications may be increased afterward. Uncontrolled hyperthyroidism is of equal importance because of cardiovascular complications and the possibility of thyroid crisis.

Adrenal or pituitary.[6] Insufficiency of these glands may be suspected if the patient is sensitive to cold, and/or has a decreased blood pressure, increased eosinophils or abnormal serum electrolytes. Definitive diagnostic tests should be carried out, and adequate replacement therapy should be instituted preoperatively.

EVALUATION OF THE LIVER[6]

Hepatic disease increases surgical risk, and adequate liver-function tests will help to delineate the degree of damage. Such tests might include a cephalin cholesterol flocculation test, a thymol turbidity, an alkaline phosphatase, a bromsulfalein test and a total protein A/G ratio. The single most valuable test in the detection of early hepatitis is the serum glutamic oxaloacetic transaminase.

EVALUATION OF THE BLOOD

Blood will be discussed under three headings: (1) blood volume; (2) bleeding states; and (3) anticoagulant therapy.

Blood volume. Hypovolemia may occur in elderly persons with cancer or ulceration of the intestinal tract, in bedfast patients, and in those who have had vomiting, diarrhea, hemorrhage or multiple surgeries. Hypovolemia may result in *severe* hypotension from what seems to have been only a minimal cause, and thus must be corrected prior to surgery.[6]

Blood-volume determinations give a truer indi-

cation of hemodynamics than does a complete blood count with a hematocrit, and with current methods of serial appraisal, the risk of hypovolemic shock or over-replacement with blood or plasma can be markedly reduced.[28] A 24-hour transfusion-free period should be allowed for blood-volume equilibration, prior to anesthesia. In an elderly patient, it requires even longer.[20]

In acute dehydration, a rise in the hematocrit to 60, or in serum protein to 9.4 in an average 70 Kg. adult will be indicative of a loss of extracellular fluid in the range of 4,000 to 5,000 cc. In chronic dehydration, water losses are intracellular and will produce little rise in the hematocrit or the serum protein.[48]

Bleeding states. With a proper history and a careful physical examination, the physician can detect almost all congenital coagulation defects and most acquired defects preoperatively.[12] The skin and mucous membranes should be inspected carefully for hematomas, ecchymoses and petechiae. The physician must also be alert for:[12, 44] (1) a history of easy bruising; (2) bleeding after minimal trauma such as scratches or shaving; (3) nosebleeds; (4) bleeding into joints; (5) gastrointestinal or urinary bleeding; (6) bleeding during previous surgery; (7) familial history of clotting or bleeding; (8) a history of ingestion of quantities of acetylsalicylic acid, phenylbutazone, antipyrin, quinine, quinidine, and coal-tar derivatives, any of which may lead to platelet deficiencies or non-specific bleeding tendencies; (9) polycythemia vera, which is notorious for causing complications of surgery, including either hemorrhage or thrombosis, or both; (10) excessive oozing, in females, either just premenstrually or during the first days of menses, probably because of increased fibrinolysis; (11) liver disease, particularly cirrhosis, which often causes excessive bleeding; (12) exposure to drugs or poisons which affect the bone marrow, such as DDT, arsenic compounds, antithyroid drugs, sulfonamides, chloramphenicol and other antibiotics; (13) irradiation by x-ray therapy, radioactive isotopes or radiomimetic drugs such as nitrogen mustard, which may result in deficiencies in platelets and other bleeding factors; (14) uremia, which may cause excessive surgical bleeding; (15) proposed surgery to a site that has been irradiated (such surgery should be delayed for five to six weeks because of bleeding tendencies); (16) leukemia and metastatic malignancy to bone, such as breast or prostatic cancer; and (17) abnormal vascular fragility in the elderly, the vitamin-C deficients, the dietarily underprivileged or alcoholics.

Most commonly the patient who bleeds excessively at surgery has no defects recognizable by currently available methods. It is presumed that the abnormalities are produced at the time of surgery, and that they are compounded through the use of blood lacking in normal clotting factors.[44] Routine bleeding and clotting times are valueless, and may cause harm because of mistaken confidence. The single best screening test at the present time is the PTT (partial thromboplastin test) with a platelet estimation. This test, combined with a one-stage prothrombin time and a bleeding time, offers a good means for rapid screening of patients for coagulation disorders.[45] More definitive diagnostic tests are available, and they should be used in patients with known or suspected bleeding problems.[41, 44, 46]

Blood is the only available source of most coagulation factors. Its proper use will reduce hemorrhagic complications by at least one-half, and will permit surgical procedures in patients even with hemophilia, including the classic type.[26]

Anticoagulants. The aim of anticoagulant therapy is to inhibit plasma coagulation, and thereby also to inhibit the formation of the red coagulation thrombus which is the main cause of vascular obstruction and embolism. But this must be done without impairing the coagulation process in the platelet atmosphere which is responsible for viscous metamorphosis and platelet hemostasis.[47]

Patients on anticoagulation therapy normally should be operated upon while on therapy, for reducing or discontinuing the anticoagulant dosage may be dangerous. Preoperative stabilization of therapy has certain advantages over postoperative initiation of therapy. Despite the low risk of bleeding during surgery, operations to be performed on the eye or the central nervous system should not be undertaken, since minor bleeding in those situations may be disastrous. In addition, most surgeons decline to operate on anticoagulated patients in such high-risk bleeding areas as the prostate.[47]

Prophylactic anticoagulant therapy is an individual problem,[39] and the decision must be based on the calculated risk of thromboembolism in each surgical, puerperal or injured patient. The type of disease, the type of operation, an age over 50 years, the planned postoperative immobilization, previous thrombosis, obesity, marked varicosities of the leg veins and congestive heart failure are all factors which must be considered.[47]

PSYCHOLOGICAL EVALUATION

The psychological evaluation of the patient, particularly as regards apprehension, is done at the time of the initial examination. If apprehension exists, it should be treated by a careful discussion of the patient's problems and an explanation of anticipated hospital procedures as well as medication, for such individuals have an increased rate of operative mortality as well as morbidity.[6]

EVALUATION OF DRUG HISTORY

A careful history of the patient's drug intake is essential, as the following examples illustrate. *A. Adrenal cortical hormone.* Preoperative and op-

erative cortisone should be given to patients who have been on cortisone or cortisone derivatives for more than a week in the preceding six months,[20] for as little as five days of cortisone will produce lipid changes and changes in the weight of the adrenal gland.[17] Adrenal atrophy and reduction of pituitary reserve are frequent but not invariable accompaniments of continuous treatment with exogenous corticosteroids.[35] Empirically, the patient should be provided with approximately 300 mg. of cortisone in the 24-hour period before and during which major surgery is performed. Somewhat less is required for minor procedures. Intravenous corticosteroid should always be kept in readiness.[35] The accompanying chart shows the administration of cortisone as practiced in two major medical centers. *B. The Rauwolfia drugs.* The effect of Rauwolfia drugs persists for at least 10 days after discontinuance, and may cause severe hypotension during surgery and even for several days thereafter. The Rauwolfia drugs act centrally, besides depleting the stores of intrinsic catechol amines in the myocardium, vascular walls and adrenal medulla.[20] *C. Chlorpromazine and other phenothiazine derivatives.* These drugs have the ability to depress or abolish reflex circulatory control.[44] *D. Chlorothiazide.* The principal danger here is serum potassium depletion and sodium depletion in the peripheral vascular wall. The sodium depletion will reduce vascular reactivity to circulating catechol amines and other vasopressors.[20] *E.* The patient should also be questioned as to his intake of digitalis and quinidine—the latter particularly if curare is to be used.[6]

LABORATORY EVALUATION

Great variations appear in the literature regarding routine preoperative laboratory studies. All authors seem agreed that a CBC and a urinalysis are required. Many feel that a BUN and a blood sugar should also be done, and all, of course, make the statement that specific laboratory tests should be carried out to answer any questions that are raised by the history or the physical examination. They all feel that any borderline laboratory studies should be redone until they adequately coordinate with the history and physical examination. More extensive laboratory work seems indicated in the elderly—i.e., those over 70 years of age. LaDue,[4] at Cornell University, feels that the following should be done in all patients over 70 years of age: hemogram, urine, blood sugar, BUN, serum bilirubin, serum proteins, cholesterol, serum chloride, serum sodium, serum potassium, blood volume, prothrombin time, chest x-ray and electrocardiogram, plus any indicated studies. It is generally felt that no patient with a hemoglobin below 10 or a hematocrit below 35 should have elective surgery without correction.[20] In addition to the routine laboratory studies, a

EMPIRICAL REGIMEN FOR MANAGEMENT OF PATIENTS ON LONG TERM CORTICOSTEROID THERAPY AT TIME OF SURGERY[35]

Surgery (type)	Mayo Clinic	Lahey Clinic
Major elective	1. Cortisone acetate 200 mg. I.M. 48, 24, and 1 hr. before anesthesia. 2. Hydrocortisone hemisuccinate kept ready for I.V. use if needed. 3. Withdraw abruptly on 1st or 2nd postoperative day or taper gradually depending on condition of patient and desirability of treating underlying disease.	1. Cortisone acetate 200 mg. I.M. 12 and 2 hr. before anesthesia. 2. Cortisone acetate 100 mg. I.M. 12 hr. after, 50 mg. I.M. at 24 and 36 hr., 25 mg. I.M. 48 hr. after. 3. Hydrocortisone hemisuccinate in reserve for I.V. use.
Major emergency	1. Cortisone acetate 200 mg. I.M. as soon as possible. 2. Hydrocortisone phosphate 100 mg. I.M. 1 hr. before anesthesia and every 8 hr. thereafter. 3. Hydrocortisone hemisuccinate kept ready for I.V. use if needed.	1. Cortisone acetate 200 mg. I.M. 2 hr. before anesthesia. 2. Hydrocortisone hemisuccinate 100 mg. in 500 cc. of 5% G/W I.V. during operation. 3. Postoperative dose as above.
Minor	1. Cortisone acetate 50 to 100 mg. p.o. 1 to 2 hr. before anesthesia. 2. Cortisone 50 mg. when patient recovers consciousness. 3. Hydrocortisone hemisuccinate kept ready for I.V. use if needed.	1. Cortisone acetate 50 to 100 mg. p.o. 2 hr. before anesthesia. 2. Cortisone 50 mg. p.o. or 100 mg. I.M. right after operation. 3. Hydrocortisone hemisuccinate kept ready for I.V. use if needed.

fasting blood sugar, a blood urea nitrogen, a total protein, and one or two liver-function tests should be done on debilitated patients with recent weight losses.[48] Pulmonary-disease patients should have a baseline carbon dioxide, plasma chloride and blood pH.[48] Weisberg[50] feels that complete baseline electrolytes should be done preoperatively in infants or in adults over 50 years of age undergoing any gastrointestinal or exploratory abdominal surgery. The stool should be checked for blood at the time of the initial rectal examination.[30]

SUMMARY

The primary role of the consultant is to provide an adequate history and physical examination with a definitive medical diagnosis, and to provide optimal conditions for surgical therapy, so that the surgeon and anesthesiologist can plan their courses of action properly.

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Postoperative Evaluation of The Surgical Patient

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Postoperative care is an integral part of the entire operative procedure, completing the triad of preoperative evaluation and surgical skill. The more complete the preoperative evaluation, the more extensive the preoperative preparation, the less likely the occurrence of postoperative complications.[1, 13] This paper is not intended to discuss complications or care related to specific types of surgery. The broad generalities indicated are designed to serve as a practical guide in the postoperative care of the patient. Each factor must be considered on an individual basis.

With the advent of improved anesthesia, fluid replacement and control of infection, the need for speed in surgical procedures has decreased. Nevertheless, the probability of most complications increases in almost direct proportion to the length of the surgery.[2] For evaluation in the postoperative period, it is important that an adequate operative note be completed. Particular attention should be paid to "what was found" and "what was accomplished," rather than to the technic employed. The report should include the type of anesthetic used, the amounts and types of fluid administered, the presence or absence of drains, a careful description of the pathology and an estimate of the blood loss.

Complications which occur in the immediate postoperative period are rapid in onset and must be corrected promptly. Observation of the vital signs is important and should be recorded, but early temperature is seldom significant, and marked blood-pressure changes do not occur without a change in other vital signs which can more easily be observed. A tachycardia of over 110/min. signifies an abnormal response and indicates a need for more complete evaluation. Pain relief is important, and should be given as required rather than on a set schedule.[3, 4] Gastric suction may be helpful and should be used when indicated. Ileus is associated with poor ventilation, delayed return of normal bowel function, and an increased incident of wound disruption. Since 90 per cent of the distending air has usually been swallowed, simple gastric suction will prevent or relieve most cases. Not all patients require suction, and the dangers of electrolyte imbalance and esophageal or laryngeal erosions should be considered. If intubation is indicated, the tube should be left in place until normal peristalsis occurs, which is usually within 36 to 72 hours. The incidence of postoperative nausea and vomiting can be lowered by the use of antiemetic drugs, but the routine prophylactic use of such medications does not appear justified except in instances where the success of the surgery may be jeopardized by vomiting, as in ophthalmologic procedures.[5, 6, 7]

FLUID AND ELECTROLYTE REPLACEMENT

There appears to be considerable confusion as to the amounts and types of postoperative fluids. A rare patient may require complicated replacement, but most patients can be treated adequately with water and saline. Since postoperative oliguria occurs normally, a urine output of over 1,000 cc. should not be expected during the first 24 hours. On the operative day, two liters of fluid should be adequate unless there has been an excessive loss. Due to the stress of the surgical procedure, there is maximal adrenal response with resultant salt and water retention. Therefore, salt is usually unnecessary during the first two postoperative days. Thereafter, normal saline is adequate for the replacement of gastrointestinal loss. Potassium is usually not required, unless suction is continued beyond the third postoperative day. The patient, in many instances, can tolerate more fluids, but actually one should be aware of his *needs* rather than of his *tolerance*. Although the urinary specific gravity is frequently considered a good gauge of hydration, it is not infallible. The presence of protein or sugar in the urine may cause an elevation of the specific gravity. The urinary urea and/or the "renal excretory index" is more reliable in evaluating renal function. A simple though not entirely dependable rule would be that the patient should be given enough fluid to permit a urinary output of between 750 and 1,000 cc./day.

In primary water depletion, the extracellular fluid becomes hypertonic. Even though the intracellular dehydration may be marked, there may be no change in plasma volume or electrolyte concentration. Usually there is an elevated urine specific gravity, and there may be an increase in

the serum sodium. Since only a small amount of salt has been lost, therapy consists of replacement with hypotonic saline or five per cent dextrose and water.

Primary salt depletion resulting from vomiting, intestinal obstruction, fistulas, diarrhea or gastric suction is more common than primary water depletion. The extracellular fluid becomes hypotonic, the kidneys attempt to combat the hypotonicity by excreting large amounts of urine without salt, and further water depletion occurs. The plasma reflects the changes in chloride or bicarbonate concentration, depending upon which body fluid has been lost. If the loss is due to bile or pancreatic juice, there is a greater loss of sodium bicarbonate than of chloride. The plasma bicarbonate is reduced, and there may be a slight increase in the plasma chloride, with resultant acidosis. With a loss of gastric juice, there is a reduction in the plasma chloride, an elevation in bicarbonate, and the development of alkalosis. Treatment varies in accordance with the source of loss. Isotonic solutions are adequate when gastric juice has been lost; hypertonic solutions of sodium chloride are preferred in patients with intestinal fistulas because of their greater salt losses. Water excess or water intoxication can be caused by rapid infusion, and it may be merely relative in an aneuric patient. In salt excess, which usually is the result of renal involvement or improper fluid therapy, the patient manifests pulmonary or peripheral edema. Therapy consists of limiting the sodium intake and increasing excretion with the use of diuretics.

The exact daily requirement of potassium is unknown, but it has been estimated that the average adult requires two to four grams per day. The primary causes of potassium deficiency include vomiting, pyloric obstruction, ulcerative colitis, prolonged administration of steroids and the continued use of potassium-free solutions. Electrocardiographic changes occur when the potassium falls below four milliequivalents per liter. Therapy requires cautious replacements, since an excess of potassium may result in cardiac abnormalities and sudden death.[8]

Metabolic acidosis is seen most frequently as the result of renal involvement. The kidneys are unable adequately to excrete acid metabolites, and at the same time conserve sodium. As a result, chloride, organic acids and ketone bodies displace the base bicarbonate, and the pH of the extracellular fluid decreases. A compensatory hyperventilation occurs, and the kidneys excrete hydrogen ions in an effort to conserve base. Sodium lactate is used in the treatment of metabolic acidosis. Lactate ions are metabolized by the liver and are replaced by carbonate ions. Fluid volume deficits should be replaced cautiously.

In metabolic alkalosis—which is caused most frequently by a loss of chlorides and potassium during vomiting, prolonged suction, excessive use of steroids or an excessive increase in alkalies—the base bicarbonate and pH are increased. The lungs attempt to compensate by withholding the carbonic acid, and breathing is suppressed. The kidneys attempt to compensate by retaining hydrogen and excreting bicarbonate, and the urine becomes alkaline. Therapy consists of infusing chloride-containing solutions so that chloride ions may replace bicarbonate ions.

Chronic respiratory acidosis is associated with an interference with breathing, or with a depression of the respiratory center. Carbon dioxide is increased, and the pH is acid. The kidneys attempt to compensate by retaining bicarbonate. The urine becomes strongly acidic. Measurements of ventilation during the first hours following surgery have shown that hypoventilation frequently occurs, and mild acidosis is not rare.[9, 10] Respiratory alkalosis, however, which results in an excess output of carbon dioxide, in hyperventilation and in an alkaline urine, is rarely seen in the surgical patient.

THE PERSISTENCE OF LOW-GRADE FEVER

Low-grade fever is usually present and can be expected for the first two or three postoperative days, but if fever continues beyond the third day, a more careful investigation is warranted. Although there are numerous possibilities, the cause is usually found in wound infections, cystitis, pyelitis, thrombophlebitis or pulmonary complications. In some instances the primary pathologic process is the causative factor, but in most cases fever signifies the onset of some complication. The time of occurrence may provide a clue as to the source of infection. Usually, if the fever occurs from the first to the third day, with an increase in pulse and respiration rates, the source is most likely pulmonary. From the third to the fifth day, it is urinary; from the fourth to the seventh day, wound infection; and from the seventh to the tenth day, thrombophlebitis or embolism.[11] Marked hyperpyrexia occurring within the first 48 hours postoperatively is almost pathognomonic of massive atelectasis. Certainly the vast majority of postoperative fevers are due to wound infections, the source of which usually can be attributed to a break in surgical technic. Routine cultures from subcutaneous spaces obtained during the surgical procedure have revealed a very high incidence of contamination, yet the usual rate for postoperative wound infections is below two per cent.[12] Therefore the mere presence of bacteria alone does not constitute proof of wound infection, or even make such an infection likely. In some obscure way, the formation of cellulitis or an abscess must be dependent upon bacterial flora, host resistance, nutritional status and intercurrent disease. Certainly the local condition within the wound is significant. The manner in which the tissues were handled, the adequacy of hemostasis and the amount of devitalized tissue are contributory factors.

THE SIGNIFICANCE OF PAIN

Postoperative pain is usually caused by tension on the wound, but unrelated pain may be referred to the incisional area. For example, pain may be the only manifestation of postoperative myocardial infarction. If the wound is the source of pain, a "probability time schedule" may be helpful. Wound pain occurring within the first 48 hours is usually due to hematoma or cellulitis; from 48 to 72 hours, to edema; and from 72 to 96 hours, to the formation of wound abscess.[13] Disruption of the surgical wound may occur in a small group of patients regardless of cautions, but the incidence is usually less than two per cent.[14] Wound infections may contribute to, but not necessarily result in, dehiscence. Mechanical disruption of the wound occurs in the first three to four postoperative days, whereas wound dehiscence is characterized by spontaneous opening of the wound at a later time, and represents a primary failure of wound healing, combined with mechanical factors. The mortality reported for wound disruption varies, but is approximately 10 per cent in adults and 20 per cent in children.[12, 15]

POSTOPERATIVE BLEEDING

Postoperative bleeding is probably one of the most distressing situations. Hemorrhage leading to hypovolemia is the most common cause of postoperative shock. A careful examination will usually demonstrate the source. An occasional patient will bleed as the result of stress precipitated by the surgical procedure, but from some area other than the operative site (for example, a stress peptic ulcer). Therapy depends upon the rate of blood loss. Slow bleeding can be treated adequately by replacement, whereas rapid loss may prompt reexploration. Surgery should not be contemplated when shock is present, but vigorous treatment usually, if only temporarily, will facilitate more definitive therapy. Determinations of both the red-cell volume and the plasma volume provide the most accurate information as to total blood volume.[16] A micro hematocrit determination alone is of limited value, and a low hematocrit in itself does not justify transfusion.[17, 18] Serial determinations of the hematocrit and blood volume, on the other hand, will provide a rational basis for replacement therapy.

Obscure causes of bleeding require more detailed investigation and a reevaluation of the clotting mechanism. Since a deficiency in platelets, regardless of the cause, is associated with bleeding, a test which evaluates the number of platelets is important. Direct count is subject to wide error, but clot retraction requires adequate platelets and is a reliable index of thrombocytopenia. Defects in most of the clotting factors can be detected by means of appropriate studies. Fibrinolysis is probably the commonest cause of serious bleeding diatheses of obscure origin, and acquired disorders are more common than the congenital. Postoperative bleeding may follow the use of drugs. Vitamin K oxide is indicated in hypoprothrombinemia; fibrinogen, in fibrinogenopenia or fibrinolysis; and the steroids may be helpful in thrombocytopenia. Ideally, therapy involves correction of the basic defect; but if appropriate studies are unavailable, one can administer fresh blood containing all the clotting factors.

THE TREATMENT OF SHOCK

When shock is present, it must be treated before consideration is given to the management of any other condition, with the possible exception of visible external hemorrhage. Hemorrhage leading to hypovolemia is the commonest cause of postoperative shock. If examination fails to reveal any evidence of bleeding, adrenal failure must be considered. Since there are no readily available tests, the urgency of the situation requires intravenous steroids. Shock may be precipitated by overwhelming infections, acute gastric dilatation, myocardial infarction, drug reactions or pulmonary embolisms. The use of vasopressor agents is indicated while attempts at specific diagnosis are being made.

VOIDING PROBLEMS

Urinary retention is a frequent postoperative occurrence. As noted previously, postoperative oliguria occurs normally, and many patients do not need to void for a period of from eight to 10 hours. The need for catheterization should be based on physical examination, and not on elapsed time. If catheterization is undertaken and if the amount of urine obtained exceeds 1,000 cc., an indwelling catheter should be left in place, since atony is present and will correct itself only if further distention is prevented. The presence of preexistent renal disease renders the patient susceptible to severe renal damage from acute surgical disease, trauma or shock. It should be remembered that the BUN is not abnormal until less than 25 per cent of normal kidney function remains. Renal anoxia as the result of shock and in the presence of a nephrotoxin may result in acute renal failure. Measuring the urine specific gravity is not a reliable means of detecting early renal failure. The measurement of the urinary urea or the urinary urea/blood urea ratio is more precise.[19, 20] The "renal excretory index" is calculated by dividing the urinary urea by the blood urea, and multiplying that factor by the 24-hour urine volume over 100, viz.:

$$\left(\frac{\text{urinary urea in mg./100 ml.}}{\text{blood urea in mg./100 ml.}}\right) \times \left(\frac{\text{24-hr. urine volume in milliliters}}{100}\right) = \text{REI}$$

The following procedure has been recommended: (1) Measure the urine volume for 24 hours after the operation. (2) Estimate the blood-urea and the urine-urea levels 24 hours after surgery. (3) Calculate the "renal excretory index," and if the in-

dex is (a) more than 200, renal function is adequate; (b) less than 80, acute renal failure is present; or (c) between 80 and 200, the patient should be carefully watched, and the index should be recalculated in the next 24 hours.[20] Several encouraging reports have dealt with the prevention of acute renal failure by means of intravenous mannitol.[21, 22]

RESPIRATORY DIFFICULTIES

Respiratory complications are among the most common postoperative difficulties. Respiratory insufficiency, frequently followed by pulmonary infection, is not surprising, since effective respiration may be inhibited by anesthetics, narcotics, pain, abdominal distention and endobronchial secretions. The commonest cause of respiratory insufficiency is bronchial obstruction secondary to the inspissation of mucus. Specific therapy depends upon removal of the excess secretions. Coughing must be encouraged, and aspiration may be necessary. Mechanical respirators have undoubtedly meant the difference between survival and death in many patients. Their use not only helps remove excess secretions but also prevents carbon dioxide retention, increases oxygen availability and decreases the work of breathing.[9, 23-26]

CARDIAC PROBLEMS

The cardiac patient in general is a good surgical risk. Adequate preoperative assessment, more than any other single factor, has greatly reduced the hazards of surgery for such people.[27, 28] Mortalities are higher in the presence of atrial fibrillation, recent infarction, active rheumatic carditis and uncompensated heart failure. It has been pointed out that there is a fourfold increase in mortality among patients with arteriosclerotic heart disease, as compared with rheumatic heart disease.[29] In general, the risk for patients with coronary disease is two to three times that of the total population undergoing similar surgery.

Elective surgery following recovery from a myocardial infarction should be postponed for at least six months.[30] There is a definite correlation between the length of surgery and the occurrence of cardiac complications.[2] Postoperative myocardial infarction is relatively rare, occurring in about 0.1 per cent of all postoperative patients, but in individuals with known coronary disease or with abnormal electrocardiograms the incidence is about 0.8 per cent. The significance of this complication lies in the high mortality (over 30 per cent), and the lack of typical clinical manifestations. Only 33 per cent experience the typical pain of infarction. Hypotension appears to be the most significant causative factor. The majority of the infarcts occur within the first three to four postoperative days, and over 90 per cent occur within the first postoperative week. A routine preoperative electrocardiogram should be obtained in all patients over 40 years of age, and postoperative electrocardiograms should be taken on patients who have sustained a hypotensive episode during surgery. Therapy for postoperative myocardial infarction follows the same principles that apply to any myocardial infarction.

POSTOPERATIVE PSYCHOSES

Inappropriate postoperative behavior should alert the physician to the possibilty of a symptomatic postoperative psychosis. Any evidence that confusion and suspiciousness are developing after a few uneventful postoperative days is sufficient reason for seeking psychiatric consultation. Unusual past complaints or a history of excessive drinking should forewarn the physician of possible trouble postoperatively.[31]

ADRENAL INSUFFICIENCY

An acute surgical crisis due to adrenal insufficiency may manifest itself as severe hypotension and shock, disorientation, coma and fever. Therapy depends upon prompt recognition and institution of intravenous steroid therapy. Patients who are known to have adrenocortical insufficiency require additional steroids during the episodes of "stress" occasioned by the operative procedure. The following regimen is suggested for such a patient undergoing a major operation. On the day prior to surgery, he should receive his usual medication plus an additional 50 mg. of cortisone intramuscularly in the evening. On the operative day, he should be given 100 mg. of cortisone intramuscularly in the morning, 50 mg. in the evening, and in addition a continuous intravenous infusion of 200 mg. of hydrocortisone during the 24-hour period. For the next several days he may receive 50 mg. of cortisone twice daily, and 100 mg. of hydrocortisone intramuscularly. By the fourth postoperative day, the patient should receive fewer injections, but he should take more cortisone orally so that the total daily dose is approximately 100 mg. The dose is then gradually reduced, so that the basal regimen is attained within a two-week period.[32]

HEPATIC PROBLEMS

Patients with liver disease have decreased tolerance for surgery. Generally, the dosage for most of the hypnotics, sedatives and analgesics should be considerably less for the patient with severe liver damage. The onset of hepatic coma may be quite rapid or relatively slow, occurring within a few hours to several days. Recognizing the signs and symptoms of impending hepatic coma is important so that therapy or preventive measures may be undertaken with the best hope of success. Initially, the mental confusion and the characteristic "flapping tremor" will tend to fluctuate. Characteristically, the confusion deepens, and the patient may go into deep coma, with failure to respond to any stimulus. Vital signs such as temperature, pulse and respiration may not be abnormal during this period. At times, convulsions may become apparent. The terminal episode is usually

bronchopneumonia. In the treatment of hepatic coma, meticulous attention must be paid to fluid and electrolytes. Feedings should be low in protein, but not protein-free. If blood is present in the gastrointestinal tract, it should be removed. Alkalosis should be prevented, and ammonium production should be decreased by means of intestinal antibiotics. Arginine or glutamate can be used in an effort to increase urea synthesis and to decrease the blood level of ammonia.[33]

THROMBOPHLEBITIS

The significance of thrombophlebitis lies not so much in its presence as in its potential complications. In patients with a clinical diagnosis of thrombophlebitis, fatal pulmonary embolism occurs in 6.6 per cent of cases involving the ileofemoral veins; in six per cent of the cases involving veins of the calf musculature; and 0.6 per cent of the cases involving the greater saphenous vein. Over 90 per cent of the fatal pulmonary emboli originate in the lower extremities. In a study of 343 cases of fatal pulmonary emboli occurring postoperatively, it was noted that 40 per cent showed no clinical or autopsy evidence of thrombophlebitis; 45 per cent showed no clinical evidence but did have pathologic evidence of thrombophlebitis; and only 15 per cent showed clinical evidence of thrombophlebitis.[13, 34] Approximately 25 per cent of thrombophlebitis cases occur within the first postoperative week, but rarely before the fifth day. Fifty per cent of the cases manifest themselves during the second postoperative week, and the remaining 25 per cent become evident after the fourteenth day.[34]

Thrombophlebitis may be a late complication of severe injury, developing several days or even several weeks after the traumatic episode. There may be a paucity of symptoms, and the findings may be difficult to detect.[35] Low-grade postoperative fevers are an important finding. Careful examination may reveal tenderness over the involved areas. Although postoperative thrombophlebitis has occurred in the upper extremities, it is rare. It occurs with twice as great frequency in the left lower extremity as in the right, and it may occur simultaneously in both lower extremities.

Since the vast majority of fatal pulmonary emboli occur without clinical evidence of thrombophlebitis, primary consideration should be given to possible prevention. Every attempt should be made to protect the patient from venostasis and trauma. One should avoid the use of restraining straps, localized leg pressure, tight abdominal compression and dehydration. Early ambulation, active leg motion and elastic leg supports will significantly reduce the incidence of thromboembolic complications. Conservative therapy in thrombophlebitis is almost always satisfactory. The regimen includes rest, elevation of the involved extremity, warm packs, phenylbutazone and adequate anticoagulation.[36, 37] Phenylbutazone is effective in the treatment of both superficial and deep thrombophlebitis.[38-42]

The literature is replete with controversy regarding the role of surgery in thrombophlebitis, but the overall results of therapy indicate that surgical interruption can significantly reduce the number of deaths from pulmonary emboli.[35, 37, 43, 44] Venotomy and removal of the thrombus have been recommended for the relief of the acute symptoms of venous occlusion.[37, 43-45] But for short-term disease, the conservative approach appears more reasonable. Surgery offers maximum protection against repeat embolization.[46]

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Crash Diets and Wrestling

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WRESTLING IS AN EXCELLENT SPORT, for it gives a wide range of boys an opportunity to engage in interscholastic athletic competition. Body size, though an important factor in other activities, excludes almost no one from wrestling, inasmuch as there are 12 weight classifications. The sport requires little equipment, and one coach can supervise many participants. Besides, it has become a very popular spectator sport.

The principal danger arises when, at the insistence of an adult or of his own volition, a boy attempts to starve himself temporarily, so as to reduce his weight and thus qualify for competition with normally smaller opponents.

PHYSIOLOGIC PRINCIPLES

Whenever one discusses weight reduction, he should recognize the difference between body *stores* and body *reserves*. Stores represent the amount of fats, carbohydrates or protein in the human or animal body that can be utilized without a disturbance of function. Reserves, on the other hand, are materials which can be lost during stress, illness or starvation, and which must be replaced quickly if normality is to be maintained.

Muscle tissue is the main working component of the body, but it also contains important reserves of protein and potassium. Adipose tissue is primarily a fuel depot, but it has an additional role as an insulator and conserver of heat, and it also can convert one fuel into another—namely, carbohydrate into fat. Bone is chiefly a supporting structure, but it also is a storehouse for calcium, phosphorus and sodium.

Man can survive for only a few days without water. His electrolyte reserves will last no longer than that length of time if he is exposed in a hot, dry climate, or incurs heavy losses from acute disease of the gastrointestinal tract. He can survive for weeks without food, provided that he has an ample supply of water, for his body contains considerable stores of available energy which protect him against a sudden cutting off of nutrient material.

Table 1 presents the values for the stores of available energy that are normal for an average man,[1] though most recent workers suggest that a total of 400 Gm. of body carbohydrate is more accurate. The exhaustion times are based on the assumption that the utilization is 1,600 cal. daily. Such an expenditure is slightly above the approximately basal rate for a bedfast man, and allows

TABLE 1

NORMAL STORES OF AVAILABLE ENERGY
IN A MAN WEIGHING 65 KG. (143 LBS.)

	Total Body Content (Gm.)	Available Stores (Gm.)	(Cal.)	Daily Utilization	Exhaustion Time (Days)
Carbohydrate	500	150	600	All used in 1 to 2 days	Less than 1
Protein	11,000	2,400	9,600	60	About 40
Fat	9,000	6,500	58,500	150	About 40

for only a small amount of activity. If hard work must be carried on, the daily expenditure will be much greater, and the stores will be exhausted rapidly.

The total carbohydrate content of the body is not high. It varies, according to most authors, between 400 and 500 Gm. The normal liver contains only 100 Gm. of glycogen, which represents just 6 per cent of the weight of the liver. During starvation there is no carbohydrate source from which an individual can restore his glycogen reserve, and the glycogen content of the liver falls rapidly. Under those conditions the supply of glycogen would last only six or seven hours.

Since the blood glucose concentration decreases only slightly during the first few days of starvation, it is obvious that glycogen is being reformed from other than carbohydrate sources. In starvation, the plasma amino-acid levels are slightly higher than in the usual post-absorptive period. The excess probably is the consequence of a more active breakdown of tissue proteins. This process, called gluconeogenesis, utilizes some of the amino acids from the body proteins and from the glycerol of body lipids to form glucose. During continued starvation, the glycogen reservoir is never built up. As soon as some glycogen is made from a non-carbohydrate source—in fact as soon as any compound is built up to glucose phosphate—it is hydrolyzed into glucose by the liver phosphatase to maintain the blood glucose concentration. Actually, as starvation develops, gluconeogenesis slowly fails in its struggle to keep the blood glucose concentration normal.

Starvation tends to lower the blood sugar content. In most individuals the fall is not great, and it is most pronounced during the first 48 hours of fasting. Thereafter the blood sugar may rise somewhat, but it never reaches the normal post-absorptive level. In some reports of starvation, values as low as 37 mg./100 ml. have been noted. These low levels should be associated with severe symptoms, but starving patients do not die of hypoglycemia.

A physiologic fatty liver occurs when the demand for fat combustion is unusually great. It occurs predominantly in starvation and in uncontrolled diabetes. In starvation, the blood level of ketone bodies may reach 20 mg./100 ml., but that concentration seldom produces severe acidosis except in children. About 20 mg. of ketone bodies per day is normally excreted in the urine. In the ketosis of starvation, from 5,000 to 10,000 mg. of ketone bodies is excreted per day—more by women than by men. As total metabolism is reduced after three to five days of starvation, the excretion begins to diminish.

Usually the total rise in lipids is not very great during starvation. On the first and second days, triglycerides are increased, along with phospholipids and cholesterol esters. Later, triglycerides tend to fall to original levels, but phospholipid and cholesterol values may remain somewhat elevated (Table 2). With the present emphasis on low-cholesterol diets, these elevated levels may be considered another hazard to health. The free fatty acid concentration of the plasma rises rapidly at the beginning of starvation. Along with ketones, it is the chief source of calories for the peripheral tissues, and it may remain elevated even in cachexia.

TABLE 2

CHOLESTEROL VALUES IN STARVATION

	Total mg.%	Free mg.%	Ester mg.%	% as Ester
Normal	185	55	130	70
Starvation:				
Early	250	70	180	72
Late	130	50	80	62

Cellular breakdown occurs in starvation. The potassium of the destroyed cells is added to the extracellular fluid, often at a rate greater than that at which it can be removed either by excretion or by transfer to intact cells. This is especially true if oliguria is present. In this decrease of potassium stores, about 2.7 mEq. of potassium is released with every gram of protein nitrogen that is broken down. Thus potassium deficiency accompanies protein deficiency, but if there is no other type of potassium loss, the intracellular and extracellular concentrations remain unaltered, unless restoration of protein is attempted without accompanying potassium. With normal food intake, the regrowth of cells produces equivalent retentions of potassium and nitrogen.

Deficiency of the B vitamins begins immediately

if the diet is changed to one that is low in these vitamins. Complete starvation, however, produces little or no deficiency of vitamin B complex, for the destroyed cells offer their vitamins to the remaining cells, and the destruction and excretion of the vitamins is greatly diminished. It is during realimentation that the need for the vitamin B complex and other vitamins becomes acute. Marked symptoms of vitamin deficiency occur during realimentation.

Carbohydrates exert an important "protein-sparing" action. When dogs had been fed a low-carbohydrate or low-fat diet, they reached nitrogen equilibrium only when five times the quantity of protein destroyed was replaced in their diet.[2] This finding points up the increased physiologic expense imposed when protein is used as the sole source of calories. When fat was given with the protein, the amount of protein required in establishing equilibrium was much lower—1.5 to 2.0 times the fasting level.[3] When carbohydrate is the dominant food, nitrogen equilibrium can be established at a level of dietary protein far below that observed in the fasting state. Graham Lusk found that the sudden withdrawal of carbohydrate from the diet and its replacement by fat resulted in an increase in protein breakdown.[4] This was shown by the change of urinary nitrogen from an average of 11.14 Gm. to 17.18 Gm./day. When the calorie needs of an individual are supplied by carbohydrates only, protein metabolism is reduced to the wear-and-tear quota. In these instances, very low values of total nitrogen excretion for 24 hours have been found, ranging from 1.75 to 1.58 Gm.[5] Fat, on the other hand, does not replace carbohydrates similarly. Bartman fed fat at a level up to 150 per cent of caloric requirements, and found that the protein catabolism was lowered to a maximum of only 7 per cent.[6] Cathcart suggested that the ketolytic effect and protein-sparing action of carbohydrate are intimately related, since ketosis is associated with increased protein catabolism.[7] In individuals on a reducing diet who have a high intake of protein and a low calorie intake, one may want to know the level of calorie intake at which carbohydrates can exert their maximal sparing effect. There is a level below which no amount of protein in the diet can prevent a negative nitrogen balance. Apparently this critical level, above which protein metabolism can be spared maximally, lies somewhere between 1,500 and 600 calories. This, of course, should contraindicate the use of starvation in wrestlers.

Excessive amounts of protein are an important factor influencing the volume of urine, especially in persons on a calorie-restricted intake. Gamble found that the volume of urine excreted is dependent to a great extent on the protein and electrolyte intake.[8] In dehydration, the urine volume is largely governed by the amount of urea and other nitrogenous metabolites that must be excreted. At first, when the fluid intake is low, the body gives up its water for the excretion of waste products. It eliminates intra- and extracellular salts in the urine so as to maintain a normal solute concentration. When the body can spare no more fluid, there is an increase in the blood concentration of waste products, especially of urea nitrogen and the nitrogenous residues of protein metabolism. This is very important when an individual—say a wrestler—increases his protein intake, limits the amount of water he drinks, and loses a great deal of fluid by sweating.

SPECIAL CONSIDERATIONS

Thus far, we have been talking about the average normal or obese individual who reduces his calorie intake and engages in little or no physical activity. Wrestlers at the junior high school level range in age from 11 to 14 years, and at the high school level from 14 to 18 years. They still are in the growing stage, and require more nutrients than do the older and more experienced college wrestlers. A fact that is not well known, especially by lay people, is that calcium cannot be deposited in bone without an adequate supply of protein. The National Research Council recommends that males between ages 16 and 19 should have 3,600 calories per day and 100 Gm. of protein. For an adult 25 years of age, it suggests 3,200 calories and only 70 Gm. of protein. These allowances are intended for individuals who are in sedentary occupations and who engage in only moderate physical activity. The wrestler undergoes vigorous physical activity while in training, and must continue to work out prior to a bout. Whether he is on a high or low-calorie diet, he tries to reduce his fluid intake and wears rubber clothes to increase his sweating, or forces himself to vomit in an effort to lose weight.

Taylor, *et al.*, reported experiments on men starved for periods ranging from 2½ to 4½ days while performing work on a motor-driven treadmill, in amounts that resulted in a total calorie expenditure of between 3,500 and 4,000 per day. The 2½-day fast resulted in a 6.8 per cent loss of body weight, and the 4½-day fast produced an 8 per cent loss in body weight. On the 4½-day fast, with hard work, there was an 18 per cent decrease in plasma volume and an 8 per cent loss in extracellular fluid (thiocyanate space). This loss of fluid accounted for 27 per cent (5.5 Kg. or 12.1 lbs.) of the total body weight.

In another study of performance during starvation, it was shown that the average total calorie deficit following the 2½-day fast was approximately 9,000, and following the 4½-day fast it was about 16,000.[10] The subjects walked at 3.5 m.p.h. on a 10 per cent grade, with an average expenditure of 550 cal./hr., for four hours each day in the 2½-day fast and for three hours in the 4½-day fast. On the first day, there were no signs of loss of fitness, but on the morning of the second day, work pulse rates were increased by 10-15 beats per minute;

work ventilation was increased; and the blood sugar in work decreased by 25 mg./100 ml. Only a small increase in work pulse rate (5 beats/min.) was noted during the remainder of the fasting period. In the short fast, the mechanical efficiency of grade walking decreased from 19.0 to 17.8 per cent. This decline was paralleled by a decrease in the non-protein R.Q. and an increased fat metabolism during work. The ability to perform exhausting 'anerobic' work was definitely impaired after the first day of starvation. On the second day, the score on the Harvard Fitness Test was decreased to 70 per cent of normal, and on the fourth day it dropped to 40 per cent. It was concluded, however, that the physical deterioration associated with the loss of 40-50 Gm. of nitrogen under these conditions can be repaired during two or three days of refeeding.

Brozek studied the changes in psychomotor functions of men undergoing four days of starvation combined with hard physical work.[11] He found a dramatic decrease in endurance, as measured by having the subjects run on a treadmill to exhaustion. In tests of speed and of eye-hand coordination, deteriorations of statistically high significance were noted. Intellectual tests, however, showed little or no impairment.

Most of the studies that have been cited were done only once in any given individual, though Brozek repeated his studies in the same subjects after an interval of six months. What would happen if the starvation studies were repeated every week for a six- or seven-week period in the same subject? Would the young man be able to replace the 40-50 Gm. of nitrogen lost each week? What would happen to the carbohydrate stores and reserves? Yet wrestling coaches expect boys practically to undergo starvation for 2 or 2½ days prior to a bout. In the physiologic experiments cited above, the subjects were given water ad libitum, but wrestlers not only starve themselves but dehydrate themselves at the same time by limiting their fluid intake, wearing rubber clothes, remaining in hot, dry environments (hot boxes), or forcing themselves to vomit. No physiologist would attempt to carry on an experiment so violent as that in a normal young man.

Another factor that is often overlooked by wrestling coaches is that the average high school participant may appear heavier than he should be, and may weigh more than expected, yet may not be obese. Using densitometry, Behnke *et al.* studied the specific gravity of football players, and found that it was erroneous to suppose that individuals who are overweight for their age are necessarily obese.[12] Brozek studied groups of active and inactive men over 50 years of age who had been matched for age and height,[13] and found significant differences in body density and fat content in the two groups. The active men had smaller skinfold thicknesses of subcutaneous fat tissue, and more fat-free tissue. Parizkova found changes in the body composition of Olympic gymnasts of both sexes.[14] During 16 weeks of intensive training, the body weight remained the same, but the subcutaneous as well as the total body fat fell rapidly. The increase in body density revealed that the fat-free mass increased, too. At the Seventh National Conference on the Medical Aspects of Sports, Novak reported the results of his studies of the differences between high school athletes and high school seniors who were not participating in any sport.[15] The average ages of both groups was 17+ years, and the heights and weights were approximately identical. He found that physical activity has a profound influence on body composition. Adolescent boys who habitually participate in sports seemed to have significantly less total body-fat and skinfold measurements than did the adolescent boys who did not participate. A boy weighing 132.0 lbs. has only 9.24 lbs. of fat, amounting to 36,800 calories. If the daily requirement is about 3,500 cal. and he is placed on a starvation diet, he uses up his body fat within 10 or 11 days, and thereafter must depend upon his body proteins as a source of energy.

CLINICAL SYMPTOMS OF STARVATION

The question arises whether or not any clinical symptoms result from the biochemical and physiologic changes which have been described. Fatigue is the first symptom noted when low-calorie diets are being used or during periods of starvation. Henschel *et al.* showed that aerobic work could be carried on with few signs of loss of fitness during the first day of starvation, but on the second day some loss of fitness was observed. Evidence of fatigue from fasting can be noted during wrestling matches, even at the college level. During the first three-minute period, the wrestler does fairly well; during the second three-minute period, his opponent scores points for reversals; and in the last three-minute period, he has to exert a maximal effort to prevent being pinned, and often is pinned.

With the onset of fatigue, one notices marked tension, irritability and a decreased ability to concentrate. The young man cannot concentrate on the holds that might win the bout, and cannot follow the instructions of his coach. Often he is so tense that he cannot move fast, and gives up points to his opponent. During starvation there is a tendency to decrease all self-initiated activities, and the athlete would rather just sit on the bench than warm up before the match. It is not unusual for a young man to fall asleep while waiting his turn to compete.

Nausea and/or vomiting is seen often as a side effect of dieting or starvation. These symptoms are not very severe, and last only a short time. However, there is one symptom that causes the physician a considerable amount of worry. During a match, the athlete may suddenly develop pain in

the abdominal wall, or over the chest. The wrestler, trainer or coach usually refers to this as a "stitch." If the pain is in the proper location, the physician must consider and try to rule out acute appendicitis, pleurisy, pericarditis, perforating ulcer, pancreatitis or even hepatitis.

POSSIBLE COMPLICATIONS

Taylor and his associates used 12 healthy young men to find out the effect that acute starvation accompanied by hard work can have on body weight, body fluids and metabolism.[9] At the end of a 4½-day fast, one man showed unequivocal jaundice, and liver-function tests demonstrated definite malfunction of the liver. In 10 of the men, the mean one-minute serum bilirubin increased from 0.11 mg./100 cc. before the fast, to 0.27 mg./100 cc. at the end of starvation, and the total bilirubin rose from 0.76 to 1.96 mg./100 cc. The four-hour bilirubin excretion increased from 1.13 to 2.96 mg. Only by the third day following the end of the fast, did all liver-function tests return to normal.

McDermott *et al.* described a case of acute pancreatitis in a young man 18 years of age.[16] This athlete weighed 133 lbs. and wanted to wrestle in the 123 lb. class. After 12 days of severely restricted fluid and food intake, he weighed 123 lbs. Thirty minutes after realimentation, he was stricken with severe abdominal pain, and he spent 10 days in the hospital before he recovered. We have seen an intensification of ulcer or ulcer-like symptoms in athletes who have tried to lose weight.

There is another aspect of crash diets that cannot be overlooked. In Wisconsin last year, 270 high schools participated in interscholastic wrestling. Approximately 11,000 boys were on the mats there. During 1965 in Iowa, 200 high schools participated in interscholastic wrestling. We have no exact figures on the number of participants, but it is estimated that there were between 8,000 and 9,000. Among these adolescent males, totaling about 20,000 in the two states, one might expect to find a few who have had rheumatic fever or other streptococcic infections such as scarlet fever, with some residual in the kidneys. Also in a group as large as this, one might expect to find a few carrying a hereditary trait of either gout or diabetes mellitus.

As noted previously, the volume of urine excreted is dependent to a large extent upon the protein and inorganic electrolyte intakes. In crash dieting or starvation, especially with a limited intake of water and salt, the urine volume decreases, and as oliguria ensues there may be evidence of renal irritation. Albumin, showers of red blood cells and casts are found in the urine. If the athlete has had a previous kidney infection from one of the streptococcic diseases, he may develop an intensification of the kidney lesion and finally a chronic nephritis.

In a fasting subject, the amount of uric acid excreted in the urine diminishes on the very first day. The normal increase in uric-acid excretion that occurs during the late forenoon and early afternoon disappears completely if the morning and noon meals are omitted. A decreased excretion of uric acid can be detected within 12 hours after the start of a fast. For at least 24 to 48 hours, the serum concentration of uric acid is not significantly altered by this retention. However, there is considerable evidence to indicate that there is a correlation between ketones in the blood and their excretion, on the one hand, and the excretion of uric acid by the kidneys, on the other. The rate and amount of uric acid excreted appear to bear a close reciprocal relationship to the rate and amount of ketones excreted in the urine.[17] Ketones are increased by a low carbohydrate intake or by a high-fat diet. Six years ago, a football player who joined the professional ranks was told to lose weight. He went on a low-carbohydrate diet, and within a few weeks had an acute attack of gout. Examination two weeks later revealed redness and swelling of a great toe (podagra), synovitis of the corresponding ankle, and a blood uric acid of 9.0 mg./100 ml. Treatment with colchicine and probenecid controlled the symptoms. After he returned to a normal diet, his symptoms quickly subsided. During the ensuing years he played professional football, he had no symptoms, and his uric-acid levels were within normal limits. It is of interest that he had no family history of gout.

Young people with family histories of diabetes, or those who may be potential diabetics, can develop clinical diabetes from starvation or crash diets. As the ketones increase, they may develop keto-acidosis during starvation. The symptoms are most likely to occur during realimentation, when the pancreas secretes a diminished amount of insulin. Recently, a wrestler reported that he was tired, that he wakened at night to void urine, and that he was unable to concentrate on his studies. He had been examined before the wrestling season began, and nothing abnormal had been found. Subsequently, he had had difficulty in making weight, and each week he had had practically to starve himself and to reduce his fluid intake. Glucose and a trace of acetone were found in his urine, and his fasting blood sugar was 190 mg. per cent. Obviously, he performed very poorly during the wrestling season.

Last, one must mention the effect of short bouts of starvation on the heart. As protein is broken down for energy, potassium is released and taken up in the extracellular fluid. The increase in this electrolyte will cause premature beats and T-wave changes in the electrocardiogram, and may even cause changes in the cardiac rhythm. These phenomena disappear shortly after realimentation, but if the athlete has had rheumatic fever previously, they can be of some consequence.

CONCLUSION

Since increasing emphasis is being placed on wrestling at the junior high school and high school levels, it is necessary for physicians to help coaches select boys for the proper weight classifications, to supervise their diets, and above all, to teach their parents that athletic prowess does not require an excessive food intake.

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Clinical Pathologic Conference No. 456

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SUMMARY OF CLINICAL FINDINGS

A FOUR-YEAR-OLD WHITE MALE was admitted to Pediatrics on October 6 with a two-week history of fever and rash. The child had always enjoyed excellent health. His history and his family history contributed no significant positive information.

His mother correlated the onset of his fever with a fall from a tricycle, after which he had complained of pain in his right elbow and left knee. Shortly after the mishap a discrete maculopapular, erythematous rash had been observed, first on his neck and legs, and later on his chest and back. Two days following the appearance of the rash, he had been admitted to the local hospital. There, his rectal temperature had spiked nightly to 103° and 105° F., and the family doctor had given him numerous antibiotics plus Benadryl and Decadron. The rash persisted, but did not itch. Despite all therapy, the child's condition remained essentially unchanged while he was in the local hospital, and after 11 days he was transferred to the University Hospitals.

The family physician reported the following laboratory data: Urinary sediment contained two to four red blood cells and a few white blood cells per high-power field. The hemoglobin dropped from an initial concentration of 12.8 Gm. per cent, with a hematocrit of 40 per cent, to 9.9 Gm. per cent, with a hematocrit of 31 per cent. Total white blood cell counts ranged from 12,000 to 44,000/cu. mm. A left shift was consistently noted. Lumbar puncture had yielded normal spinal fluid under normal pressure. Ova and parasites were not found in the stools. Serologic tests for Brucella, Paratyphoid A, Paratyphoid B, and Typhoid O and H antigens were negative. A serologic test for infectious mononucleosis was nonreactive. The sedimentation rate was 41 mm./hr.; the C-reactive protein test was 1+; and the antistreptolysin-O titer was 50 Todd units/ml.

On admission here, the patient was a well-developed and well-nourished, but a quite irritable white male child. His rectal temperature was

102° F. He had an erythematous, blotchy, dry rash, most prominent on his face. In addition, generalized brawny edema was noted. His mucous membranes were dry. The only other positive physical finding was hepatosplenomegaly, the lower margin of the liver being palpable 2 cm. below the right costal margin, and the splenic tip being felt 1 cm. below the left costal margin.

Initial studies revealed a normal urinalysis, a hemoglobin concentration of 9.3 Gm. per cent, and a hematocrit of 28 per cent. The total white blood cell count was 9,150/cu. mm., with 73 per cent mature neutrophils, 8 per cent band neutrophils, 1 per cent eosinophils, 13 per cent lymphocytes, 3 per cent monocytes, and 2 per cent myelocytes. The erythrocyte sedimentation rate was 62 mm./hr. (Westergren). The blood urea nitrogen was 15 mg. per cent. Serum electrolyte concentrations were within normal limits. The serum albumin concentration was 2.2 Gm. per cent, and the serum globulin concentration was 4.1 Gm. per cent. The serum glutamic oxaloacetic transaminase was 140 SFU/ml. Roentgenograms of the chest and an electrocardiogram were normal.

During his first week at University Hospitals, the boy was given intravenous fluids. He became much less toxic, and apparently was doing quite well until an episode of diarrhea developed on October 9. Hemolytic Staphylococcus aureus was cultured from the diarrheal stools. He was treated with neomycin sulfate for six days, and the enteritis seemed to be well controlled until October 26, when diarrhea recurred. Again he was treated with neomycin. He appeared to be recovering from his acute febrile episode, the rash had faded, and he was much less toxic, but he still had temperature spikes to 102° and 103° F.

On November 9, scleral and generalized icterus were seen for the first time. The jaundice deepened progressively, and ascites was demonstrated on November 17. At that time, a mass attached to the lower margin of the liver was palpated by three examiners. The child's stools became clay-colored, and his urine was dark brown and contained bilirubin. Abdominal paracentesis was done, and 50 cc. of clear yellow fluid was removed. The specimen revealed no growth on bacteriologic culture, and microscopically no malignant cells were noted. An upper-gastrointestinal barium study was interpreted as normal. An intravenous pyelogram was normal. A roentgenologic skeletal survey revealed no bony abnormalities. The patient's serum complement titer was 100 units/ml. of serum. The antistreptolysin-O was 100 Todd units, the C-reactive protein was 3+, the latex and bentonite tests for rheumatoid factor were negative, and a lupus erythematous prep was negative. A sample of bone marrow was within normal limits. Two blood cultures yielded no bacterial growth. Other laboratory tests are summarized in Table 1.

During the boy's last 36 hours of life, he became unresponsive. He was treated with fresh-blood transfusions, massive antibiotic and steroid therapy, and measures designed to reduce the nitrogen load in his intestinal tract. Nevertheless, he continued to deteriorate slowly, and he died late in the evening of November 18.

CLINICAL DISCUSSION

Dr. J. C. Taylor, Pediatrics: During the six weeks that this four-year-old boy was on the pediatric wards, he presented extremely difficult problems, both diagnostic and therapeutic. As is attested by the discussion of his case today, we solved neither of them. Mr. Hudgel, of the junior class, will present his views of the case. Perhaps he can do better than we did.

Mr. D. Hudgel, junior ward clerk: The four-year-old boy whose case we are considering today died of extreme liver failure after a nine-week course. A lymphomatous process such as Hodgkin's disease, with superimposed suppurative cholangitis, is our primary diagnosis.

Not infrequently, Hodgkin's disease presents with no enlargement of the peripheral lymph

TABLE 1

SUMMARY OF ADDITIONAL TEST RESULTS

Date	Hgb. Gm.%	Hct. %	Total WBC cells/cu. mm.	Erythrocyte Sed. Rate (Westergren) mm./hr.	BUN mg.%	Serum Alb./Glob. Gm.%	Total Bilirubin mg.%	Serum Alk. Pse. S.U./ml.	SGOT SFU/ml.	Thymol Turbidity u./ml.
10/6	9.3	28	9,150	62	15	2.2/4.1			140	1.0
10/12	7.2	22	9,050	25		3.0/2.8	0.75	8.35	82	
10/15	Transfusion of 200 cc. of whole blood									
10/19	11.6	35	11,330							
10/27	9.3	30	14,200							
11/10	9.6	29	12,000	71		4.1/3.5	7.90	9.75	610	12.0
11/18	10.2	31	12,000	5	12			6.00	1,190	15.0

nodes. The mass palpated in this case could have been an involved retroperitoneal lymph node, or a node that was located near the liver hilum. Cutaneous manifestations and a spiking fever often occur with Hodgkin's disease. Hepatosplenomegaly and jaundice may also be present. Cholestasis is present because of fibrosis of the portal triads or obstruction of the biliary system by nodes near the hilum. Ascites may follow peritoneal involvement.

Since patients with lymphomas are susceptible to infections, we postulate that this child developed cholangitis secondary to biliary-tract obstruction. This process thus caused further liver-parenchymal damage, which contributed to the elevations of the SGOT, the alkaline phosphatase and the thymol turbidity.

A severe disseminating form of histoplasmosis could cause fever, hepatosplenomegaly, anemia and a maculopapular rash, but generalized lymphadenopathy and leukopenia are often present in that infection. Leptospirosis often presents with the same clinical picture, but in this case there were no neurologic signs or cerebrospinal fluid abnormalities. Brucellosis is consistent with hepatosplenomegaly, anemia and abnormal liver function tests, and a negative serologic test in the first two weeks does not rule out that diagnosis. Jaundice is uncommon, and leukopenia is usually present with brucellosis.

Viral hepatitis must also be considered. Patients with viral hepatitis can develop signs of biliary-tract obstruction. One can also get elevated alkaline phosphatase values with that disease. Acute yellow atrophy may have been a complication in this case. The maculopapular rash, fever and hepatomegaly could be explained if a toxoplasmosis infection were present. A significant serologic titer is very common in the general population. In the acquired form of toxoplasmosis, chorioretinitis and lymphadenopathy are rare. All of the findings of hepatic cell damage could have been secondary to a toxoplasmosis infection. This, essentially, is our differential diagnosis.

Dr. Taylor: It was the clinical impression of those who cared for the boy on the ward that he had some type of proliferative disease—a hepatoma, a lymphoma or a sarcoma. Most of the staff in Pediatrics were intimately concerned with this boy and his care, and all of them are prejudiced. Thus we are fortunate in having Dr. Clifton, of the Department of Internal Medicine, to discuss the case. He never saw the child.

Dr. James A. Clifton, Internal Medicine: I'm glad you feel "fortunate," Dr. Taylor, for I don't. My confidence was bolstered, however, when Dr. Zimmerman, the pathologist, leaned across just now, and told me I couldn't possibly guess what this child had, for I had already come to that conclusion.

I must plead profound ignorance about this case, for I have not seen a large number of children with liver disease. Moreover, the cases that I have seen have impressed me with the difficulty they present in differential diagnosis.

In going through the protocol, I made a brief outline of this boy's illness, and I inserted some dates for my own convenience. Around September 23, he fell from a tricycle, and shortly thereafter it was noted that he had some fever. Two days later, on September 25, a maculopapular erythematous rash was observed, and that rash was an important aspect of his illness throughout its course. On September 27, he was put into a local hospital. He was quite febrile, and he was given numerous drugs. I assume that with all the antibiotics and other medications which he was given, some of them were given by injection.

On October 6, about two weeks after the beginning of his illness, he was transferred to University Hospitals on the pediatric service. He was febrile, the erythematous rash was still present, and there was brawny edema. We are told that he had hepatosplenomegaly, but the liver was not very much enlarged. It extended only 2 cm. below the right costal margin. Furthermore, the spleen was not very much enlarged, for only the tip of it was felt. In a child who is febrile and has a rash, it is not unusual for the spleen to be palpable. We are not given any additional information about the examination of the liver. Was it hard, was it tender, was it nodular, or did it have any other unusual characteristics?

About three days later the patient developed diarrhea. Staphylococcus was cultured from the stool, treatment was given, and the diarrhea improved. However, in spite of the general improvement in the patient's condition, the diarrhea recurred on October 26—a little over a month after the beginning of the illness. On November 9 jaundice was noted, and the child's condition worsened.

A week later, on November 17, ascites was detected, and a mass attached to the lower part of the liver was felt by three different examiners. It would be helpful to know of the characteristics of that mass. Was it a small, round, hard, globular mass that one would associate with a distended gallbladder, or was it a more irregular mass that might be associated with a protrusion of tumor from the underside of the liver? At the same time, the stools were clay-colored, suggesting that bilirubin was no longer gaining access to the gastrointestinal tract. The child's condition rapidly worsened, and he died on November 19 in liver coma. The total duration of his illness had been a little bit less than two months, and the jaundice had appeared six weeks after the beginning of the illness.

Dr. Taylor, are there any answers to the questions that I asked about the physical examination —regarding the consistency and the nodularity of the liver, and about the type of mass that was present below the liver?

Dr. Taylor: It did not suggest gallbladder. It was

an ill-defined mass, felt only when the patient was fairly heavily sedated. It was felt by three different people. Although the liver was quite enlarged and the spleen could be felt, the extents of these phenomena were not so great as to exceed normal limits.

Dr. Clifton: In casting about for things that might have produced this clinical picture, it seems to me, one could look at the problem as one in the differential diagnosis of fever, since the patient had fever for two months. In the first place, he could have had some type of infectious process. It might have been bacterial. Did he have osteomyelitis? Did his fall from the tricycle result in an infection in the bone? A bone survey was done, and it was negative. Thus, perhaps, these questions are not germane. Was there a primary enteric infection of some sort? He had two episodes of diarrhea late in his course, and Staphylococcus was cultured. Could either of those things have led to a bacterial infection of his liver?

It is possible that this young man developed multiple abscesses in the liver which were kept in some sort of control by the antibiotic treatment that he received, only to burst forth, finally, produce a more generalized liver necrosis (liver death), and cause death for the patient. I think this certainly is a possibility, but I don't believe it is a very good one.

Could he have had a mycotic infection? Some have already been mentioned to us by the representative of the junior students. There is no evidence of systemic mycoses. It is possible that fungal overgrowth occurred after all of the antibiotic treatment that the patient received, but again there is no evidence of systemic involvement, and I could not base the liver problem on a mycotic infection. Was it a parasitic infection? Toxoplasmosis or amebiasis would be possibilities, but again it doesn't seem that I can pin much hope on them. Spirochetal infections do not seem likely.

Could this have been a viral infection? Included would be the virus of infectious hepatitis, serum hepatitis, and the virus of cytomegalic inclusion disease. Recently cytomegalic virus infections have been reported in large groups of children. Many of these youngsters have had liver disease, and in one instance cytomegalic virus was isolated from the liver of a 19-year-old girl dying of hepatitis.

One of my friends in the Department of Dermatology tells me that a rash such as this child had is often a nonspecific thing, and that we need not consider a specific relationship between the rash and liver disease. I am not certain, however, that a rash of such severity and duration could be associated with infection in a nonspecific manner.

In the differential diagnosis of fever, we have to consider neoplasms. Lymphoma is a reasonable possibility. Primary liver cancer developing in postnecrotic cirrhosis is a good bet. I think there are several good diagnostic possibilities in the list I have presented, and of the items I have mentioned, I am inclined to give first ranking to viral infection of the liver, and second ranking to neoplasm of the liver.

To look at this differential diagnosis from another standpoint, let's consider the differential diagnosis of liver disease. In the first place, this boy may have had some kind of cirrhosis. What kinds of cirrhosis afflict children? There is the cirrhosis associated with cystic fibrosis, but we have no evidence to support that diagnosis. Wilson's disease is a cause of cirrhosis in children, but again there is nothing specifically for or against it in this case, although I think the fever and rash would be against Wilson's disease. Polycystic liver disease, galactosemia with cirrhosis, and biliary cirrhosis all occur in childhood, but none seems likely as a cause of this child's trouble. Congenital hepatic fibrosis occurs in children, but I am unaware that fever is an important part of its clinical picture. In cases of congenital hepatic fibrosis, the serum alkaline phosphatase is usually elevated, and the other liver-function tests are generally normal, whereas most of this child's liver-function tests were abnormal. About one-third of the patients with congenital hepatic fibrosis have polycystic kidneys; the intravenous pyelograms in this child were normal. Thus we are left with the probability that chronic hepatitis, if it was present in this child, was the cause of cirrhosis.

Chronic hepatitis, with or without cirrhosis, seems the best diagnostic possibility. There was no family history of hepatitis, and there was no history of acute hepatitis, but these do not eliminate the possibility. Chronic hepatitis often presents itself after an insidious course. It is often associated with some kind of rash. There is fever, and the white blood cell count is elevated. However I am unaware of its being elevated to 44,000/cu. mm. as it was on one occasion in this child. From the time the child came to this hospital, his white count was normal, and it was only slightly elevated throughout the remaining five or six weeks of his illness. A very high white count certainly suggests a pyogenic infection of the liver, but the count did not stay high, so I am inclined to ignore that factor for the time being.

The fact that the serum albumin was low when the child entered the hospital, only two weeks after the start of his illness, suggests that some chronic process had been going on in his liver for some time. The elevated serum globulin, thymol turbidity and SGOT findings are compatible with hepatitis. The terminal exacerbation of the disease, with liver-cell necrosis, is seen in patients with chronic hepatitis.

As I mentioned earlier, acquired cytomegalic virus infection has been reported to cause a similar clinical picture. In most of the reported cases, the diagnosis has been based on the isolation of the virus from the patient's urine. Cytomegalic virus in the urine of young children who have

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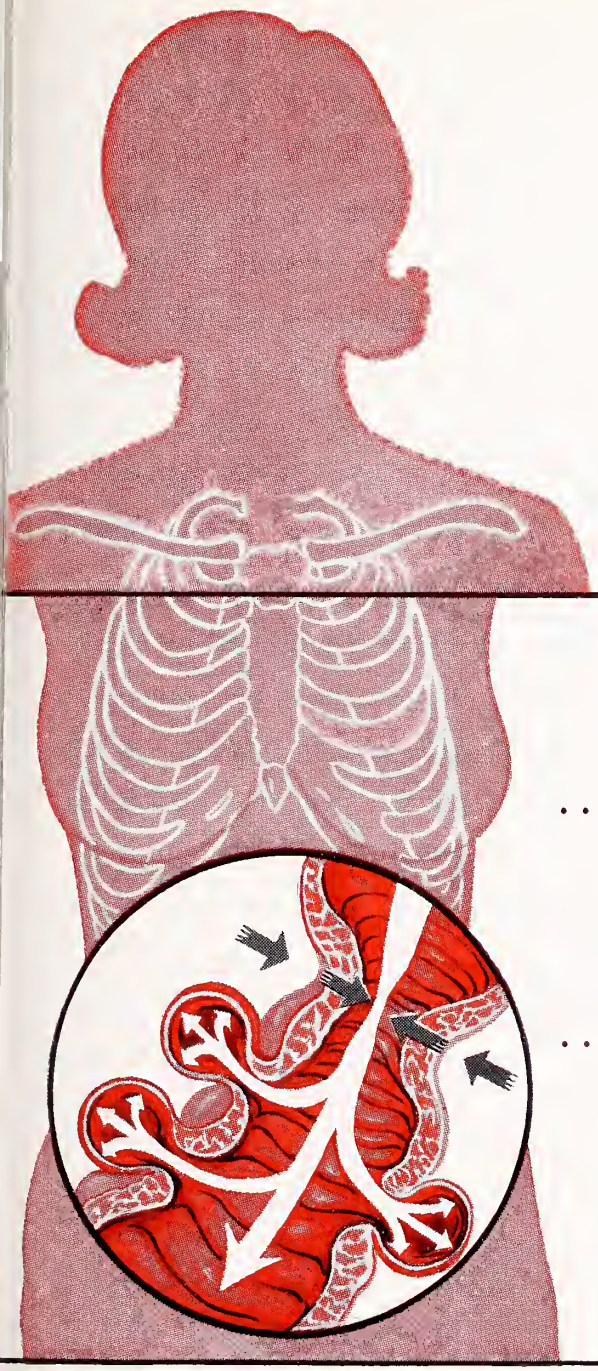

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SEARLE

Research in the Service of Medicine

chronic liver disease does not necessarily mean that the virus is producing the chronic liver disease, but the association is quite interesting, and I assume that some causal relationship may well exist.

I believe that this patient had some form of chronic viral hepatitis, perhaps associated with some of the morphologic changes of postnecrotic cirrhosis. The sudden change in his terminal course, leading to liver coma, could have been due to massive liver-cell necrosis or to a hepatoma arising in postnecrotic cirrhosis.

Dr. Taylor: Dr. Zimmerman, would you tell us what was found at autopsy?

Dr. G. R. Zimmerman, Pathology: This child had massive hepatic necrosis, with loss of practically all hepatocytes. The massive hepatic necrosis explains practically all of the clinical manifestations of disease that he displayed, except for several minor ones.

There were a number of pathologic findings that related directly to this massive liver necrosis. The spleen weighed 90 Gm., as compared to a normal of 40 Gm. Splenic enlargement is described in hepatitis, with massive necrosis of the liver. Probably it is mainly a manifestation of overwhelming infection. This boy had a quite severe lower nephron nephrosis terminally. The kidneys weighed 200 Gm., as compared with a normal of 120 Gm. The renal injury probably was not of any practical significance, since the blood urea nitrogen and the creatinine at the time of autopsy were essentially normal. In other words, the lower nephron nephrosis was a terminal event. There were patchy pulmonary hemorrhages throughout both lungs, and microscopically they were associated with neutrophilic exudation. In a segment of sigmoid colon, there was recent submucosal hemorrhage. We have good reason to believe, of course, that this patient had some bleeding defect. Whether the pulmonary hemorrhages were basically bronchopneumonia with more than the usual type of hemorrhage, or whether they were a combination of pneumonitis and hemorrhage, we have no way of determining. Also, the organism responsible for the pneumonitis is not known. Those cultured from the lungs were diphtheroids.

The brain was swollen and weighed 120 Gm.—10 or 12 per cent more than normal. Dr. McCormick examined the sections and found that there had been a loss of neurones in the dentate nucleus, some loss of Purkinje cells in the cerebellum, and the presence of a particular type of large protoplasmic astrocyte which is relatively specific for brain injury due to liver failure.

The liver weighed 420 Gm., whereas one would expect a normal liver to weigh 100 Gm. more. The liver was soft and red, brown and yellow. The microscopic sections were most striking. First, there was no perceptible liver cord structure. One could easily find portal spaces because they were marked by a proliferation of bile ductules. After a little search, one could identify central veins. Between them was a meshwork of condensed stroma in which there were occasional groups of two or three cells, but more often there were isolated ones which were barely recognizable as hepatic parenchymal cells. The cells tended to be large and to have irregular nuclei which appeared immature. More than that, they also had abnormal shapes and abnormal distributions of nucleoplasm more characteristic of degeneration than of uncomplicated regeneration. In place of the liver cells were clumps of acute and chronic inflammatory cells, including numbers of macrophages and an occasional structure that probably represented a necrotic hepatocyte. There was a suggestion of fibrosis, but it was virtually impossible to distinguish a genuine from an apparent increase in fibrous tissue, because of the collapse of preexisting hepatic stroma. The bile-duct proliferation, however, by itself indicated a disease process of several weeks' duration, and quite possibly if not probably, of two months' duration. There were no definitely recognizable inclusion bodies. This finding excludes cytomegalic inclusion disease.

Dr. McCullough did very extensive cultural studies on this patient's blood and on his kidney and liver tissues for leptospirosis. He tested for some 12 different leptospira antigens, but was unable to culture organisms and was unable to demonstrate antibodies for leptospira. Dr. McKee will present the virologic studies shortly.

There were two clinical findings that I had no reasonable explanations for. One was the rash. It had been my impression that a rash was not characteristic of hepatitis. Dr. Clifton's assurance on that point has been most helpful. The prominence and persistence of this child's rash, in fact, led me seriously to consider viral infections other than infectious hepatitis, but insofar as is known the other viral diseases which occasionally produce liver injury do not produce massive hepatic necrosis.

There is no satisfactory explanation for the mass that was palpated late in this child's life. The prosector found no mass in the abdomen to correspond with the findings on palpation. There was a flat fibrous plaque between the liver and the diaphragm which, from the sections, seemed probably congenital and which might have produced some unusual tensions or tissue stresses that could have been interpreted as a mass. The other possibility is that the uneven consistency of the liver, as a result of necrosis, might have led physicians to suspect a mass. The mass probably was not the gallbladder, for the gallbladder was described as having had only a moderate amount of bile in it.

Dr. McKee, would you tell us of the virus studies you did in this case?

Dr. Albert P. McKee, Microbiology: I worked out a calendar identical with Dr. Clifton's, with the onset on or about September 23. That, I think, is an important date to remember, in relation to our findings. We received the first antemortem specimens on November 16, consisting of a rectal swab and blood. Three days later, on November 19, we received the postmortem material consisting of

tissues—lung, liver and spleen—and blood. An extract of the material on the rectal swab and a pool of the tissues obtained from autopsy were passed separately, for three passes of two weeks each, in Rhesus monkey kidney tissue culture. No obvious signs of viral involvement occurred. Serum removed from the red cells was run against our Brown virus, which is a type of Reo virus, for antibody titer by hemagglutination-inhibition and neutralization. The hemagglutination-inhibition test showed no antibody on either of the serum specimens, which of course had been drawn only three days apart. The neutralization test did show a moderate amount of antibody against this virus.

From our brief exposure, two observations seemed warranted. First, the likelihood of isolating a virus from a patient ill some 54 to 57 days previously may have been rather small. Patients and animals succumbing after neutralizing antibody has had time to form may yield a virus with great difficulty. The likelihood of success depends on the virus, of course. Some viruses are shed in spite of the patient's having antibody, as in some rubella cases, but in others, such as cases of equine encephalomyelitis, it is difficult to isolate a virus after the fifth day following onset. It is practically axiomatic that the earlier the specimen is submitted for virus isolation, the better.

The second observation concerns antibody studies late in the disease. Demonstrating a rising antibody titer when the patient has already been ill for some 54 days is next to impossible. Antibody titers tend to peak in about three weeks—sometimes a little earlier and sometimes a little later. A falling titer probably has the same significance as a rising titer, but the patient may succumb, as in this case, making such a demonstration impossible. Or if he lives, he may not wish to reopen the issue some six to 12 months later. The acute-phase serum or blood should be drawn as early as possible, and almost always within the first seven days. The convalescent blood should be drawn about two to three weeks after onset.

When Dr. Zimmerman excerpted the history available to me, I was struck with the similarity between this patient's record and those of some patients with ECHO virus infections. Not uncommonly, patients infected with ECHO viruses develop rashes early in the disease, and the rash may be most prominent on the face. Respiratory involvement and diarrhea may also occur as consequences of the infection. The liver and spleen may also be involved, but reports to date—at least the ones I have been able to investigate—have usually stated that the disease process in the liver and spleen was mild. Our method of isolation was acceptable for isolating ECHO viruses, but my earlier remarks regarding the isolation of a virus late in the disease still apply. We are now running the serum specimens against several ECHO viruses to learn whether the patient had an unusually high titer. Except for inclement weather, we would have done so earlier. Tissue cultures freeze on the plane—I'm not sure how—and that mishap puts us behind with our work.

Dr. Zimmerman: Thus we have a case of massive hepatic necrosis with some evidence that infectious viral hepatitis may have been the cause. Certainly the evidence is not conclusive. Massive hepatic necrosis may be due to some exogenous toxin, but the patient's history rules out that possibility in this instance, and most commonly it is due to viral hepatitis. We can probably exclude hepatitis due to ECHO virus, hepatitis due to infectious mononucleosis, etc., because those diseases are not known to produce massive necrosis.

So by the processes of deduction and exclusion, we conclude that this boy's illness was infectious hepatitis from the beginning. He was anicteric for perhaps an unusually long time, when one considers the severity of his disease, but there is no compelling reason for us to seek some other explanation.

Until now I have ignored the history of Staphylococcal enterocolitis. There were no pathologic manifestations of that entity, but I assume that the episode was indeed Staphylococcal enterocolitis, and that it was successfully treated.

Dr. Henry E. Hamilton, Internal Medicine: Can you really exclude exposure to carbon tetrachloride or to toxins such as bug sprays that a four-year-old child might accidentally encounter? Were the findings at autopsy consistent with a toxic reaction? I also might ask whether the patient was a farm or a city boy.

Dr. Taylor: The boy lived in a city.

Dr. Zimmerman: From the pathologic findings, one could not exclude an exogenous toxin, but one would not expect the disease to be progressive after a single insult. Repeated or continued exposure is excluded by the fact that the boy was removed first to a local hospital and then to this hospital.

Dr. Hamilton: Not necessarily. A person could become sensitive to things such as DDT which are fat-soluble and held in fat deposits. Thus, with a remote insult, one could exhibit these toxic reactions later.

Dr. Zimmerman: I must agree with you that we cannot rule it out except by history. But wouldn't it be unlikely for fever to occur so early? You'd almost have to assume that some other process was involved.

Dr. Taylor: One thing that I might mention isn't noted in the protocol. When the patient was first admitted to his hometown hospital, he had marked generalized lymphadenopathy. I wondered whether that might point to some virus other than that of infectious hepatitis as we now know it.

Audience: Are percutaneous liver biopsies done in children?

Dr. Taylor: Yes, they can be done.

Dr. Zimmerman: This particular case, and the associated dilemma that we were left with, offer us an opportunity to take off on a closely related topic—the laboratory diagnosis of hepatitis. As a

necessary prelude, I wish briefly to suggest a reevaluation of liver biopsy—particularly of needle biopsy.

The original histopathologic description of the liver in viral hepatitis related to the classical, textbook type hepatitis with icterus, a febrile course and eventual recovery over a period of a couple of months. The other type of lesion that was described is the fulminating, fatal type. The respective histopathologic findings in these two types of disease are quite consistent from one case to another, and are quite easily recognized. What is not currently appreciated is that with anicteric—or what we think is anicteric—viral hepatitis, the histopathologic changes may be minimal and quite nonspecific. Histopathologic diagnosis is further complicated by the fact that there are only quantitative and inconstant differences between mild hepatitis and drug jaundice. (I am speaking of the modern drug jaundices caused by chlorpromazine, contraceptive hormones that have been incriminated in England, etc.) The problem is further complicated by the fact that some other viruses are now thought to produce hepatitis—again, usually, with nonspecific alterations. Pathologists have consequently become very cautious in the interpretation of liver biopsies, especially of needle biopsies, in cases of this sort. Liver biopsies are still very useful in many instances, and usually provide some useful information, but the biopsy must be interpreted with a complete background of clinical data, and with all available laboratory procedures, including the unique facilities that we have here in Dr. McKee's laboratory.

We have thought it appropriate at this time for Dr. McKee to review for us the procedures that he uses and the specimens that he requires for the diagnosis of viral hepatitis, because such virologic studies reveal the significance of the subtler ones of the morphologic changes that we observe.

Dr. McKee: Materials that we prefer to study in our laboratory, when we try to isolate a virus, include unclotted blood and a rectal swab or fecal material. We have shown all of these specimens to contain the virus by using filtrates from them and inoculating human volunteers directly. Certainly both specimens should be taken as early as possible. Since the viremia is present as early as one to three weeks before the onset of jaundice, the earlier the specimen is taken, the better, and we must remember that we are already from one to three weeks beyond the optimal time. We pass this type of material in human embryonic kidney tissue culture and in monkey kidney tissue culture five times before we call it negative. Since each pass must incubate about 12 days, an attempt to isolate the virus is a long-drawn-out procedure. Most of our isolates have been made on the third or fourth pass.

It is probably a good idea to take some of these specimens for virus isolation at intervals. From our studies of antibody reactions, we believe that our virus is spilled periodically, as is indicated by

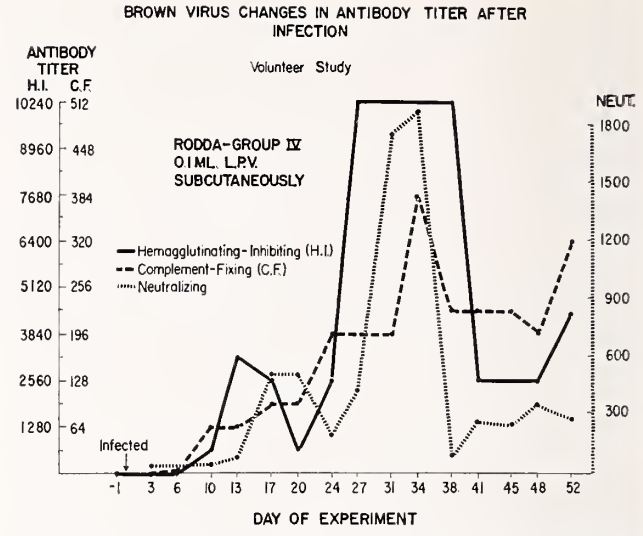

Figure 1. Antibody response of three different antibodies, showing titer swings.

the change in antibody response. Figure 1 illustrates this point. You may think this picture resembles a fever curve, and it doesn't do badly at that. Actually, it shows the antibody responses of three different antibodies: complement-fixing, hemagglutinin-inhibiting and neutralizing, from an individual—a volunteer—who had been given the virus. I think you can see the titer swings. We think that the titer is driven down when the virus is liberated in considerable quantity.

The first and subsequent unclotted-blood specimens that we receive are used in what we call the "direct tests" on the red cells that are sometimes washed and sometimes unwashed. (We run the test both ways.) Then we use the plasma for antibody studies. One can also use the ghosts of the red cells and plasma as material from which to isolate the virus. The direct test may be characterized as follows. We have found that the virus that we studied will stick on red blood cells, and that an antibody against this virus will agglutinate the red blood cells on which the virus is stuck. We have been able to agglutinate the red blood cells from volunteers by mixing them with the antibody against the virus, and we also have noticed this occurring in cases of infectious hepatitis, particularly early in the course.

Figure 2 shows the bottoms of some test tubes after the red cell pattern has settled out. At the lower right, the antibody is shown agglutinating the patient's cells; the bottom middle tube shows

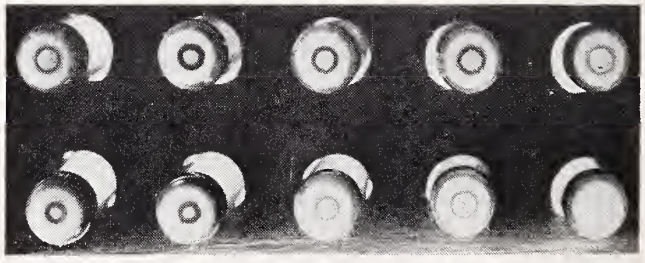

Figure 2. Bottom view of test tubes, showing the settling-out of the red cell pattern.

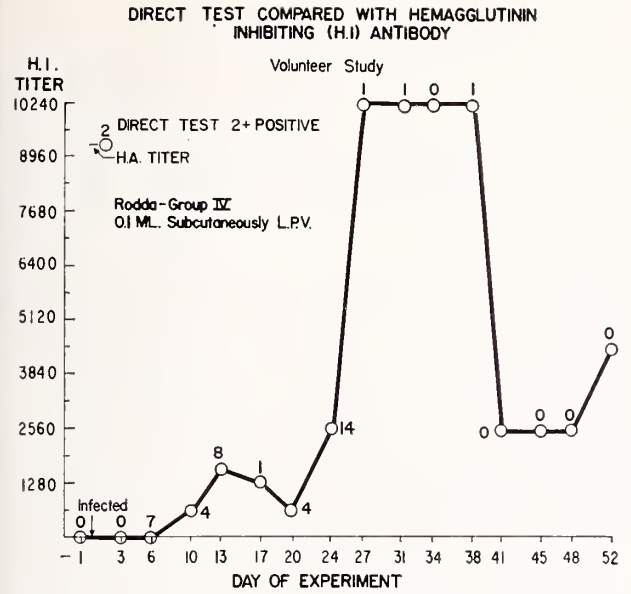

Figure 3. Antibody response in relation to the direct test.

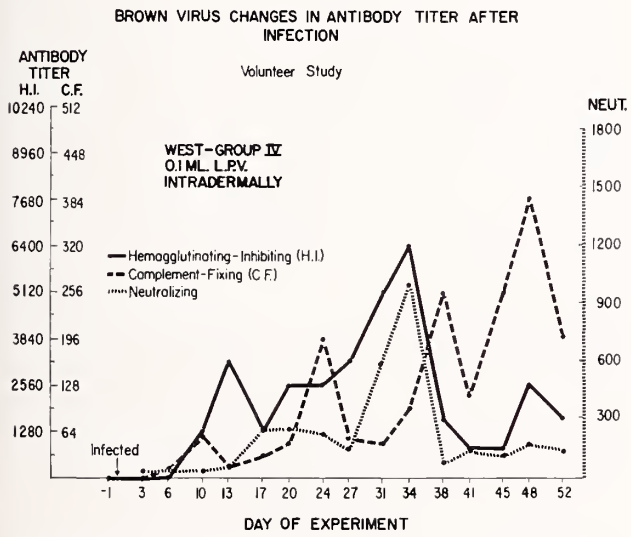

Figure 4. Rapid, independent swings of antibody, implying that three different antibodies are involved.

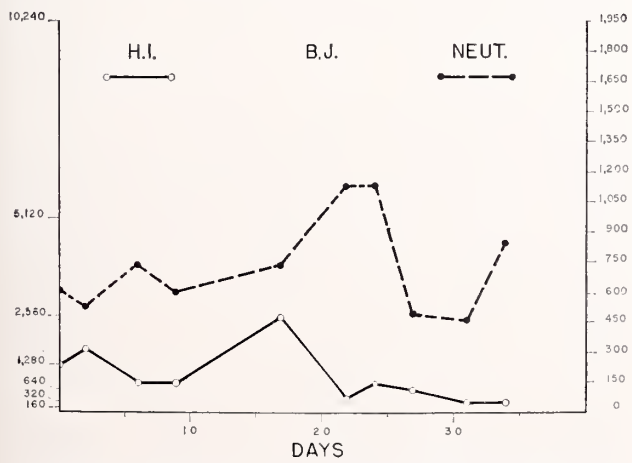

Figure 5. Neutralizing and hemagglutinin-inhibiting antibody titers in a case of infectious hepatitis, showing the up-and-down swings of the titers.

a control in which normal serum has been used; and the last tube on the lower left is a saline control. As mentioned earlier, the plasma is used to study antibodies. We use hemagglutination-inhibition tests since the virus we work with will agglutinate human O, Rh-negative cells, and antibody will prevent this hemagglutination. This, along with the direct test, can be run on the same day that the blood is received.

The neutralization test—the other that we run—requires considerably more time. In fact, up to 10 or 11 days must pass before one can be sure that the virus will not break loose from the antibody block and destroy the tissue-culture cells. In our studies using volunteers, we were able to show complement-fixing antibody too, but it requires such a huge amount of antigen that we don't often run that test on a patient's plasma.

Figure 3 shows the antibody response in relation to the direct test. Reading from the left, I think you can see on the figure where the volunteer was infected. At first the antibody titers were still low—the figures represent the degrees of positivity on the direct test. You will notice that the direct test became positive on the sixth day to a 7+ reaction. Then it varied from 4 to 8, and then back almost negative, then to 4 and 14, and then as the antibody titer came up it was very difficult to agglutinate the patient's cells any more by means of antibody against the virus. Hence, we no longer could show the presence of virus or viral antigens on the patient's red cells.

Figure 4 is on a different person. It again shows the very rapid swings of the antibodies, and shows that they were independent from one another. In other words, they did not follow a pattern of increase and decrease, and consequently we think they were three different antibodies. In Figure 5 you see both the neutralizing antibody titer and the hemagglutinin-inhibiting antibody titer of an actual case of infectious hepatitis, bobbing up and down just as in the volunteer study. It also shows why one must draw specimens in fairly close succession. Looking at the bottom graph, one sees that the hemagglutinin-inhibiting antibody titer specimens drawn on the tenth day and shortly after the twentieth day were essentially the same. If one had only those two specimens, he would miss the peak in between.

Figure 6 shows another reaction in a patient—a young lady in our own laboratory who had stuck her hand with a needle contaminated with Brown virus. She developed infectious hepatitis. You can see that there was a very rapid response after a considerable period of incubation. She had been using the Brown virus propagated in mouse tissue mixed with an adjuvant, in an attempt to immunize animals. She had a very rapid spike in her hemagglutinin titer.

Figure 7 shows the response in one of Dr. Clifton's patients. The antibody titer went up to a very high range, and then, after we had followed it for some 200 days, it finally came down and began to level off.

Figure 8 shows a case in which there was a very abrupt drop in antibody. This does not happen very often.

These that I have shown you are more or less samplings. The neutralizing titer, you see, falls off than perfect. On the left you see the specimens. with a pretty nice curve, but the hemagglutinin-inhibiting antibody titer spikes again, and then gradually tapers off.

Table 2 shows the general batting averages that we have had. Certainly our results have been less The "inclusive" group are the ones in which the physicians asked us to rule out infectious hepatitis. They said, "This may be obstructive hepatitis," or "This may be infectious hepatitis." Our batting average on such miscellaneous problems, with only two specimens to work on, has been relatively poor—57.4 per cent. However, when the physician has committed himself more strongly, saying, "This is probably infectious hepatitis," rather than just asking us to rule it out, our percentage has gone up to roughly two out of three. If three specimens have been submitted, our chances are improved. From 63.4 per cent for the all-inclusive group, our batting average has risen to 78 per cent. I call your attention to these figures so that you will not be misled into thinking that our study has yielded perfect results.

I want to take this opportunity to thank all those who have sent material to the laboratory. I hope you will continue to send it.

Dr. Taylor: I should like to congratulate Dr. Clifton on his diagnosis, and to suggest that he make rounds occasionally on the pediatric wards.

SUMMARY OF NECROPSY FINDINGS

1. Massive hepatic necrosis, consistent with viral infection, type undetermined
2. Jaundice
3. Ascites
4. Patchy hemorrhages of lungs and gut.

STUDENTS' DIAGNOSES

1. Malignant lymphoma
2. Suppurative cholangitis.

DR. CLIFTON'S DIAGNOSES

1. Chronic viral hepatitis
2. Postnecrotic cirrhosis.

TABLE 2

SEROLOGIC STUDIES ON HEPATITIS CASES (BRV-I ANTIGEN)

Situation	Results	
	Positive	Negative
2 SPECIMENS		
Inclusive group	93/162 (57.4%)	69/162 (42.6%)
Diagnosed IH/SH	68/102 (66.7%)	34/102 (33.3%)
3 SPECIMENS		
Inclusive group	59/93 (63.4%)	34/93 (36.6%)
Diagnosed IH/SH	57/73 (78%)	16/73 (22%)

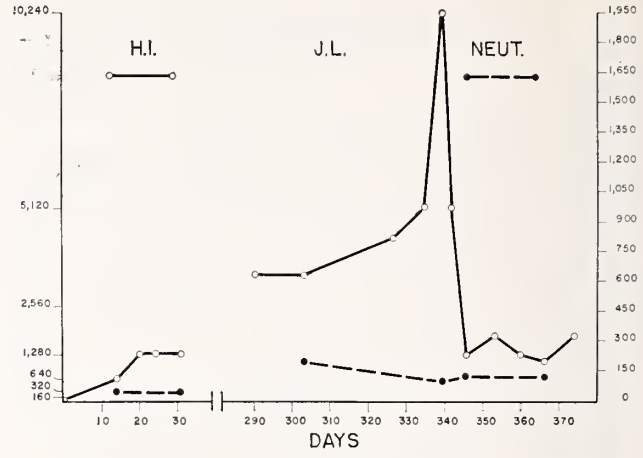

Figure 6. Case of infectious hepatitis showing a very rapid spike in hemagglutinin titer.

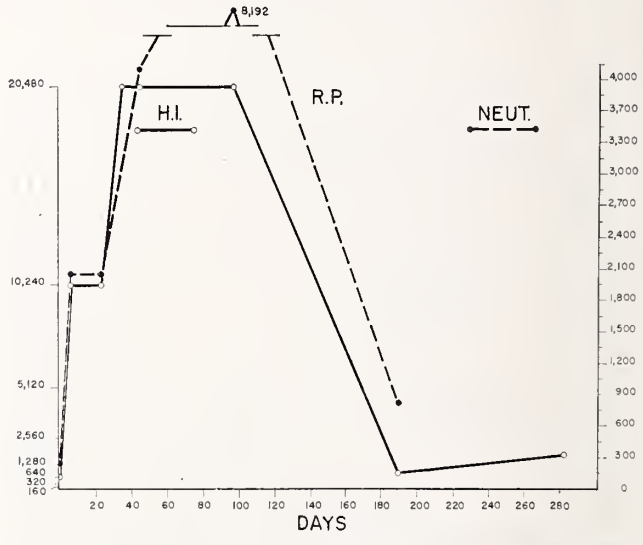

Figure 7. Response in a patient, showing a very high antibody titer, then a gradual drop and leveling off.

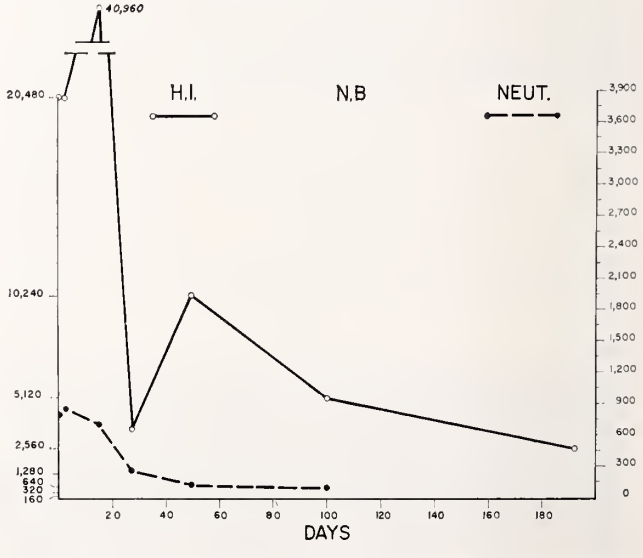

Figure 8. Case in which a very abrupt drop in antibody occurred. Neutralizing titer shows more of a curved drop, whereas the hemagglutinin-inhibiting antibody titer spikes up again and then gradually tapers.

THE PROPHYLAXIS OF LEPROSY

After perusing the war news in the papers—reading of the large numbers of Viet Cong who have been killed during the past week and of the "modest" losses of our young men on those battlefields half-way around the world—it is gratifying to pick up the LANCET and the BRITISH MEDICAL JOURNAL and to read that at long last there appears to have been some progress in the prophylaxis, sadly not of war but of leprosy, a disease which has plagued mankind for centuries.

It is estimated that there are some 12,000,000 cases of leprosy in the world today. It is a disease which has killed, maimed, crippled, disfigured and made pariahs of countless numbers through countless years. With the introduction of the sulpha drugs, great progress has been made in the treatment of the disease, but a report of success with B.C.G. in its prevention in Uganda, and with dapsone, a sulpha drug, in South India, is dramatic news.

The report by Kinnear Brown and Stone* concerns a controlled trial of B.C.G. vaccine in eastern Uganda from September, 1960, to September, 1962, in over 17,000 children, all of whom were relatives or contacts of known leprosy patients. First these youngsters, most of whom were under 10 years of age, were given a Heaf tuberculin test. Those with negative or minimal reactions were alternately allocated to an unvaccinated group totaling 8,152 children, and a B.C.G.-vaccinated group of 8,149. Children with Grade III or IV tuberculin reactions were not vaccinated, and likewise those who already had skin lesions due to leprosy were excluded from the study.

The first follow-up on the children who took part in the study was carried out between May, 1963, and May, 1964. An almost unbelievable number of the participants (94 per cent) were seen and examined for leprosy. During this period of about two years, a total of 116 cases of leprosy had developed. In the unvaccinated group, the incidence was 11.0 per 1,000; and in the vaccinated group, it was 2.2 per 1,000. Thus the vaccinated group had an incidence only one-fifth as great as the unvaccinated. Among the children with Grade III or IV reactions to tuberculin, who had been left unvaccinated, the incidence of leprosy after two years was 8.3 per 1,000. There appeared to be no correlation between the age of the child at the onset of the study or the grade of the initial tuberculin reaction, on the one hand, and the incidence of tuberculosis, on the other.

The results of the Uganda study, according to the report, establish that B.C.G. vaccine confers substantial protection against the early forms of leprosy, at least for a two or three year period. However, inasmuch as the early forms of the disease may resolve spontaneously, it will be necessary to continue observations of the trial groups for several years to determine the outcome of the early lesions, as well as to study the further incidence of the disease.

Kinnear Brown and Stone point out that the 80 per cent reduction in the incidence among the vaccinated as compared with the unvaccinated was very similar to the 82 per cent reduction in tuberculosis among school children in Britain during the first 2½ years following B.C.G. vaccination, as reported by the Medical Research Council in 1956. The authors found it remarkable that B.C.G. vaccine, which is derived from an attenuated strain of bovine tubercle bacilli, appears to protect as well against leprosy as it does against tuberculosis. This observation, however, appears to confirm a laboratory report of the suppression of multiplication of leprosy bacilli in the footpads of B.C.G.-vaccinated mice.

The authors emphasize that their report is only a preliminary one, and that a longer period of follow-up is necessary before a precise evaluation of B.C.G. vaccination can be made. The forms of leprosy observed in the follow-up period have been early lesions, and some of them may resolve spontaneously. In fact, of the leprosy lesions detected on entry to the study, 8 per cent had resolved completely one to three years later, and 21 per cent appeared to be resolving. Thus, it is possible that the early types of leprosy skin lesions may be natural immunologic responses to infection with leprosy bacilli, and B.C.G. vaccination may have only modified the response to a first infection. The final conclusion concerning the value of B.C.G. vaccination rests upon the proportion of lesions which resolve in the vaccinated and unvaccinated children. It is urged that the trial groups be followed at least until the age of 15 years, because the prevalence of leprosy in Uganda rises to a peak between the ages of 10 and 14 years.

The authors sound a note of caution, pointing out that results obtained in Uganda may not be duplicated in other parts of the world. All of the cases detected in the follow-up period exhibited the early tuberculoid lesion. Only through continued observation can it be determined whether B.C.G. vaccination protects against the occurrence of fully-developed tuberculoid leprosy, which if untreated may produce severe nerve damage. In Uganda, and in fact in most of Africa, 90 per cent of leprosy is of the tuberculoid type.

In the follow-up period, no cases of the more

* Kinnear Brown, J. A., and Stone, M. M.: B.C.G. vaccination of children against leprosy: first results of trial in Uganda. BRITISH M. J., **1**:7-13, (Jan. 1) 1966.

Editorials continued...

serious type of lepromatous leprosy were detected among the children in the trial group. In Uganda only about 8 per cent of the patients with leprosy have the more severe and highly infectious lepromatous leprosy. In other areas of the world, the proportion of lepromatous disease ranges between four and seven out of ten cases. Further studies will determine whether B.C.G. vaccination will protect against leprosy of the lepromatous type.

A leading article in LANCET* briefly reports upon a trial of dapsone, a sulpha drug used in the treatment of leprosy, and in the prophylaxis of the disease among children exposed to it in their intimate family settings. This study was made in South India, and involved a survey of a circumscribed area of over 200,000 population, 96 per cent of whom were actually examined—a formidable undertaking, even if done in America. A total of 4,370 persons were found to have leprosy, for an incidence of 21 per 1,000.

The source or index cases in the study were 624 patients with lepromatous leprosy. Of those patients, 334 were bacteriostatically negative lepromatous cases, and 52 were bacteriologically positive non-lepromatous cases. The intrafamilial child contacts of the 624 patients totaled 732, and they were divided randomly into comparable groups, special attention being given to age and sex. One group was given dapsone twice weekly in increasing doses varying from a maximum of 20 mg., for children under two years of age, to 150 mg. for those in the 11-14 year bracket from the fourth to the ninth month of treatment. Afterward, half that dose was given. The control group received placebo tablets provided in similar sealed packets bearing the child's name.

An interim report two years after the start of the program revealed that from a total of 585 contacts, 43 cases of leprosy had developed among the exposed children. In the dapsone-prophylaxis group, 14 cases of leprosy developed among 291 contacts (4.81 per cent) and 29 cases developed among the 294 contacts in the control group (9.86 per cent). This difference was considered significant.

Some rather surprising results appeared. The protective value of the drug under the conditions of the trial were not seen until after nine months of treatment, and only in contacts under 10 years of age. For some unexplained reason, it was more effective in boys than in girls. All of the cases of leprosy, both in the treated and untreated children, were of the non-lepromatous type.

During the study, one medical auxiliary had the supervision of 35 contacts living within a radius of five miles. This raises the question of whether the cost of such a program may be prohibitive for "developing" countries. Several other questions remain unanswered. The diminishing contagiousness of index cases under dapsone treatment is unknown. The duration of dapsone prophylaxis has not been established. The degree of risk from toxicity or sensitivity to the drug when it is given over long periods of time has not been determined. Whether the prophylactic administration of the drug simply suppresses the overt signs of leprosy, resulting in a temporary modification of the disease, or whether it actually prevents it, is a further question that must be answered.

Although the reports of success with two different approaches to the prophylaxis of leprosy are only preliminary ones, they offer great hope that this dread disease can be controlled. If the billions spent upon war and the tools of war could be diverted to the prevention of disease and relief from hunger and poverty, perhaps one could assert with conviction:

God's in his heaven—
All's right with the world.

CONTRAINDICATIONS TO CATARACT REMOVAL IN THE ELDERLY

In a recent issue of TEXAS MEDICINE, Dr. Everett L. Goar, a prominent Houston ophthalmologist, admonishes against the removal of cataracts in elderly people who are getting along satisfactorily without surgery.* Though the ordeal may appear a minor one to the surgeon, it is often a critical event in the life of the patient, and the outcome of the operation frequently disappoints him, too.

Dr. Goar has in mind the aging man or woman whose vision is failing, and who has difficulty in reading street signs and no longer can follow the flight of a golf ball.

If an operation is performed on one eye, then surgery is necessary on the second one if the patient is to have binocular vision. The alternative consists of fitting the patient with a cataract lens and masking the patient's other eye, a situation worse than the initial one.

Fitting the patient with either one or two contact lenses creates additional difficulties in many instances, particularly if the patient's hand is shaky or if he is impatient or neurotic. A nervous person has difficulty in adjusting a cataract lens because it restricts his field of vision, and makes objects appear larger and closer. Where these miseries might add to the others which so often accompany growing old, Dr. Goar thinks they should not be inflicted upon someone who can still

* Prevention of leprosy (Leading article), LANCET, **1**:354-355, (Feb. 12) 1966.

* Goar, E. L.: Cataract removal in elderly patients. TEXAS MEDICINE, **62**:40-47, (May) 1966.

see well enough to do most of the things he wants to do. He pleads for a very careful examination of the eye of the elderly patient. Wide dilatation of the pupils may permit detection of degeneration of the retina in the region of the macula. Recognizing that condition can prevent embarrassment to the doctor and disappointment to the patient, for cataract surgery in such an instance would produce little improvement in the patient's vision.

He urges physicians to weigh the indications for a cataract operation carefully, since it is quite possible to increase rather than lessen the disabilities of the elderly.

DOUBTS CONCERNING ROUTINE PROCTOSCOPIC EXAMINATIONS

A reappraisal of routine protoscopic examinations as part of the general physical examinations of patients with no intestinal or anorectal symptoms, and in whom digital examination has been negative, has recently been reported from the Mayo Clinic.* It should be of great interest to clinicians as well as to laymen who regard the procedure as something of an indignity.

In 1950, a study of the findings in almost 2,000 proctosigmoidoscopic examinations done at the clinic revealed adenomas of the rectum and sigmoid colon in patients free of complaints referable to the distal bowel. Polypoid lesions were found in 9.7 per cent of that group of patients, all of whom were more than 40 years of age. At that time, it was presumed that these lesions either demonstrated malignant changes, or that they were potentially malignant. As a consequence, it was the considered judgment of the physicians there that a proctoscopic examination should be made a part of the routine physical examination for all patients over 40 years of age. The validity of that reasoning was generally accepted, and from numerous clinical centers similar rates of occurrence for polyps were reported, and in a substantial number of patients, malignant lesions were said to have been found. As a result, routine proctoscopic examination came to be generally accepted.

The premise for routine proctoscopy has recently been questioned. Adenomatous polyps of the rectum and sigmoid are no longer universally regarded as premalignant. Doubts concerning the hazard posed by these lesions has prompted a reevaluation of routine proctoscopy at the Mayo Clinic, particularly in consideration of the current concept of the adenomatous polyp. The relationship between the villous adenoma and cancer of the colon and rectum is not in doubt, for it has been substantiated by numerous studies.

* Moertel, C. G., Hill, J. R., and Dockerty, M. B.: Routine proctoscopic examination: second look. MAYO CLINIC PROC., 41:368-374, (June) 1966.

The recent investigation was carried out at the Mayo Clinic during a three-month period extending from January 1 to April 1, 1964. The subjects were outpatients who had been given general examinations and had been seen by internists with a special interest in gastroenterology. Consecutive patients who were over 40 years of age and who were acceptable according to the established criteria for admission comprised the study group. Excluded were (1) patients with symptoms referable to the intestine, rectum or anus, (2) patients with previous histories of either benign or malignant neoplasms of the colon or rectum, (3) patients with a diagnosis of rectal abnormality detected on digital examination, (4) patients on whom proctoscopic examinations had been performed within the previous 12 months, and (5) patients with physical or emotional problems which made them unsuitable for proctoscopic examination.

A complete history was taken and a physical examination was performed on every patient by a staff physician. Digital rectal examination was performed on each of them. Proctoscopic examination was urged in each case as a screening test for cancer, and the nature of the examination was explained. All proctoscopic examinations were performed in the Section of Proctology by experienced proctologists, and the examination was carried out for a distance of 24 cm., unless prevented by angulation of the bowel or failure of the patient to cooperate.

A total of 1,020 patients more than 40 years of age had routine proctoscopic examinations in this reevaluation study. In 944, or 92.5 per cent, the examination was negative or revealed findings of no pathologic significance. X-ray examination of the colon was recommended in 14 instances, usually because of fixation of the colon but occasionally because of the presence of blood that was not thought to be due to trauma from the examination. The roentgenograms showed no evidence of abnormality except in a few cases where there were suggestions of old diverticulitis. An extrarectal mass was detected in three cases, and these proved to be retroflexed or fibroid uteri. A nonspecific inflammatory change in the mucosa was observed in three patients, but in none of them was it considered of clinical significance. In 11 patients small lesions were observed which were diagnosed as polyps, but on microscopic study they were found to be hypertrophied mucosal folds, lymphoid follicles or inflammatory tags.

Polypoid lesions were found in 87 patients, however. The lesions were significant in only 76, or 7.5 per cent, of the 1,020 patients studied. Only six lesions were over one centimeter in diameter; four of these were adenomatous polyps, and two were villous adenomas. All of these lesions showed some atypical cellular changes, and one of them

Editorials continued...

showed a superimposed *in situ* adenocarcinoma, grade 1. Thirteen patients had lesions from 0.5 to 1.0 cm. in diameter. Eight of the nine that were submitted for pathologic study proved to be adenocutaneous polyps, and the other was a villous adenoma. In 67 patients, polyps measuring less than 0.5 cm. were found, and histologic examination of 24 of them revealed that 13 were micro adenomas, and 11 could not properly be diagnosed as adenomatous polyps. In one patient a rectal carcinoid tumor 0.5 cm. in diameter was recognized, and the nature of the lesion was confirmed in the laboratory.

Some authors have suggested that the rectal polyp may be a sentinel lesion that indicates the presence of a more serious neoplasm of the colon at a higher level. In 45 patients in the Rochester study who were found to have true adenomatous polyps, subsequent x-ray studies of the colon were done, and all of them were found to be normal.

The Mayo authors point out that there is a wide disparity in the results reported from so-called routine proctoscopic examinations. Most of the reports vary but little as regards the incidence of polypoid lesions, but the reported incidences of carcinoma show considerable variation. This difference is ascribed to the fact that in many reported series, the proctoscopic examinations were not routine procedures as parts of general examinations, but were in fact examinations of patients referred to the proctologic section of a hospital because of significant anorectal or intestinal symptoms. The results from cancer-detection centers likewise do not represent findings on routine examination of presumably normal individuals. In many reported series, lesions could be felt on digital rectal examination, so that proper comparison could not be made with the Mayo study.

It is emphasized that much of the disparity in the reported incidences of carcinoma in routine proctoscopic studies can be attributed to changing criteria for the diagnosis of carcinoma. Until recently, a pathologic diagnosis of malignancy in polyps of the colon and rectum was frequently made on the basis of *in situ* atypical cellular change. At the present time there is not complete unanimity among pathologists that *in situ* cellular dysplasia is a sufficient basis for a diagnosis of carcinoma in an adenomatous polyp. Though some pathologists insist that *in situ* atypia is indeed a stage in the development of carcinoma, others are equally insistent that a diagnosis of carcinoma cannot be made until the lesion is locally invasive.

Significantly, a footnote to the discussion of the significance of cellular atypia states that Dr. Dockerty, the pathologist in this trio of authors "subscribes fully to the thesis that clinical carcinoma of the colon must always pass through such an *in situ* change."

Thus, in the 1960 and 1964 studies at the Mayo Clinic, 2,452 patients more than 40 years of age who had negative histories and whose digital examinations had been negative, underwent routine proctoscopy. No invasive carcinomas were found, but adenomatous polyps were observed in 7.5 per cent of the group. These findings indicate that routine proctoscopy is a practical screening test for adenomatous polyps, but not for invasive carcinomas. Villous adenomatous polyps that are recognized as premalignant lesions were found in just 0.3 per cent of the entire group of patients who underwent routine proctoscopy.

The authors conclude that routine proctoscopic examination does not appear to be a practical screening test for invasive carcinoma. Final evaluation of this measure, however, awaits resolution of the role of the adenomatous polyp in the natural history of carcinoma. It is suggested that a controlled prospective study be carried out to determine the incidence of death from carcinoma of the rectum and sigmoid in patients undergoing periodic routine proctoscopic examination, and in a matched control group.

THE HISTOLOGY OF THE ADENOMATOUS POLYP

In the immediately preceding editorial, the real crux of the question regarding the justifiability of the routine proctoscopic examination was said to be the histology of the adenomatous polyp and the histologic changes that have been thought to transform it into a carcinoma. A recent article from St. Alexis Hospital, Cleveland, contributes to an understanding of the difference between a benign and a malignant polyp of the colon.

The Cleveland study in no way resembles the report on the outcome of routine proctoscopic examinations at the Mayo Clinic. It reports the biopsy findings in 67 cases of colonic polyps that were examined independently by three pathologists during the two-year period 1962-1963. They were surgical specimens, and polyps in children and villous adenomas were not included. The authors acknowledge that there was disagreement concerning some specimens, and it was frequently necessary to do serial sections, to perform further biopsies, or to resort to more elaborate operative procedures before a correct diagnosis could be ascertained. Serial-section studies were made on all lesions showing foci of cellular dysplasia.

The authors point out that adenomatous polyps may be sessile or pedunculated. The pedicle is not

* Naji, A. F., Salwan, F. A., and Bartunek, R. R.: Adenomatous polyps of colon. OHIO STATE MED. J., 62:447-452, (May) 1966.

a true part of the polyp, but an extension of normal colonic mucosa, and it may or may not contain submucosa or muscularis mucosa. Polyps usually measure 1 to 3 cm. in length, and 0.2 to 1.0 cm. in diameter, but lesions over 3.0 cm. in diameter are encountered, and it is the larger lesion in which cellular dysplasia is most often observed. The central stroma of the pedicle is continuous with that of the body of the polyp, and proximally the mucosa and stroma of the pedicle join the corresponding structures of the colon. It is significant that the muscular layers of the colon are usually not involved in the structure of the pedicle.

The body of the adenomatous polyp is made up of a central stroma of vascular fibrous and muscle tissue from which there are peripheral extensions which are surrounded by glandular tissue. The glands of a polyp are usually larger, and there is more variation in size and shape in them than in the glands in normal colonic mucosa. The glands of a polyp are lined by tall, columnar cells, and there is a striking layering of nuclei—often five or more—in the basal cells. The basal and luminal cell margins are usually clear cut, but the intracellular boundaries are less distinct. Nuclei within the cells or within the glands may or may not be found.

Though the etiology of colonic polyps is unknown, it is believed that true adenomatous polyps are new growths which are the result of focal mucosal-cell hyperplasia. The authors assert, "It is quite possible that the same stimuli responsible for the production of colonic carcinoma are also responsible for the development of colonic polyps. Adenomatous polyps occur with greater frequency in the age groups in which the incidence of colonic carcinoma is also high." They point out that the frequent finding of more than one polyp in a surgical or autopsy specimen suggests that they are the result of either a multifocal stimulus or some unknown systemic stimulus that leads to foci of abnormal cell hyperplasia. It is hypothesized that whenever there is a polyp in the colon, it may be that other cells within the colon have the potentiality for producing more polyps. Though various theories have been proposed concerning the factor or factors that lead to polyp formation, none of them has been confirmed.

The authors emphasize that it is impossible to determine whether a colonic polyp is benign or malignant on the basis of gross examination alone. Most of the small lesions are benign, and the larger lesions, over 3 cm. in diameter, are often malignant. Yet exceptions are common. The presence of a pedicle and a polypoid configuration provides no assurance that the lesion is benign. A purplish discoloration and a firm consistency may be misleading, for those features may be due to strangulation of a benign polyp. A local area of firmness in a polyp may be due to focal dysplasia.

In their experience at St. Alexis Hospital, the authors found that frozen sections were of limited value in the diagnosis and in decisions concerning management of patients with colonic polyps. Reliance on frozen sections may interfere with a thorough study of the lesions by routine permanent sections.

According to the Cleveland group, even very minor deviations from the normal benign pattern in a polyp can be recognized easily. Microscopically, all grades of cellular dysplasia can be seen, from slight atypia to unquestioned carcinoma. The glands in a malignant area usually show considerable variations in size and shape, and instead of the orderly stratification of nuclei in the basal cells, the polarity is lost. Cells appear to be crowded within the stroma, and are much larger than those of normal colonic mucosa. The nuclear component in a malignant area is relatively hyperchromic and greater than in a benign area, and the cells contain prominent nucleoli. The cytoplasm of the malignant cell is usually less acidophilic than that of a benign cell. In contrast to benign areas, adjacent malignant cells lose their intercellular boundaries and their usual architecture. Mitotic figures are frequent in malignant lesions. The authors say "The presence of cords and sheets of malignant cells within dense stroma makes a diagnosis of malignancy in a polypoid lesion relatively simple."

Areas of cellular dysplasia may be seen in the peripheral zones or within the glandular mass of the polyp, and the changes may be entirely intra-epithelial. It is this type of lesion which many investigators decline to call malignant, despite the extent of dysplasia, and limit the diagnosis of carcinoma to lesions which show evidence of invasion. The Cleveland group believes that if the changes which are found in these isolated intra-epithelial foci are severe enough to suggest carcinoma on a morphologic basis, they should be considered intra-epithelial carcinomas.

In an adenomatous polyp in which dysplasia is present, invasion may occur in the central stroma or the pedicle. If the invasion is limited to the central stroma, the general morphology of the entire polyp and the degree of nuclear dysplasia are the factors which determine the diagnosis. Invasion of the stroma of the pedicle beyond the base of the polyp stamps the lesion as a malignant submucosal invasion.

In the report from St. Alexis Hospital, 67 cases of adenomatous polyps were studied. Of that group of patients, 44 were male and 23 female. Their ages varied from 32 to 86, but the incidence of polyps was highest in patients over 60 years of age. In 47 patients, 58 polyps were found, some of which showed dysplasia. In 20 patients,

Editorials continued...

22 polyps were found associated with an independent carcinoma elsewhere in the colon.

Approximately 12 per cent of the polyps in the study showed carcinomatous changes, and in an additional 10 per cent, marked focal dysplasia was present. From their experience, the authors concluded that surgical treatment of polypoid lesions should result in a cure of many early carcinomas, and that although the majority of adenomatous polyps of the colon are benign, a significant number prove to be malignant. The presence of all grades of dysplasia in a given number of polypoid lesions suggests a common etiology for polyps and carcinomas.

To the three patients in 1,000 in whom villous adenomas were found on routine proctoscopic examination in the recent Mayo study, the measure proved of great practical value, and until it has been unequivocally determined that the adenomatous polyp of the colon does not possess a malignant potential, it appears that routine proctoscopy should not be abandoned. Greater effort should be made to resolve the conflict over what truly constitutes malignancy in this type of lesion, however, and the proposed prospective, controlled study by the Mayo physicians would go a long way toward the resolution of that problem.

Speakers at the Time Capsule Ceremony

On July 14, a collection of items typifying Iowa medicine and the Iowa Medical Society in the mid-twentieth century—most of them contributed by county medical societies throughout the state, and by the IMS Auxiliary—were sealed in a sheet-metal box and placed beneath the sidewalk at the front of the new IMS headquarters building in West Des Moines. When they are unearthed, 50 or 100 years hence, they are certain to be a source of interest, though doubtless an occasion for amazement, to the Iowans of that future time.

Reverend Fred E. Miller, of Des Moines, assistant to the Methodist bishop of Iowa (left), gave a prayer at the ceremony. Dr. Ben Whitaker, a Boone radiologist and the 1952-1953 president of the IMS (left center), spoke of the progress which has occurred in medicine during his years of practice. Dr. Robert C. Hardin, of Iowa City, dean of the U. of I. College of Medicine (right center), talked of the advances in medicine which can be expected in the years ahead. Dr. Samuel P. Leinbach, of Belmond, the IMS president (right), after describing the numerous mementos, placed them in the box.

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Health Survey of Teenagers in Two Iowa Counties

The Public Health Service's Health Examination Survey, authorized by Congress in 1956, will visit Mahaska-Wapello Counties to examine a sample of the teen-aged population (ages 12 through 17 years) during a four-week period beginning September 28. This will be part of a series of examinations in a nationwide health survey of youngsters.

About 200 youths to be examined in Mahaska and Wapello Counties will be chosen by a scientific sampling process from the entire 12-through-17-year population.

Examinations will be given in the Health Survey's mobile examination center, which will be brought to the area in September and set up in a convenient location.

Purpose of the examinations is to collect on a uniform basis statistical information on various aspects of the health of 12-through-17-year-olds and to obtain data on certain physical and physiologic measurements relating to growth and development in this age group.

The process will include a special examination by a physician of the eyes, ears, nose and throat, heart, and neuromuscular systems; a dental examination by a dentist; a test of visual acuity and color vision; recordings of blood pressure; biological and biochemical tests of a blood sample; an audiometric test for hearing performed in a soundproofed room; an x-ray of the hand and wrist for bone age; an x-ray of the chest for cardiovascular and pulmonary abnormalities; a 10-lead electrocardiogram and a phonocardiogram of the heart; a timed vital capacity using a wedge spirometer; an exercise tolerance test under a measured workload using a treadmill; a grip-strength test; recordings of height, weight and various other measurements of growth and development; and measurements of verbal, perceptual and social skills by a psychologist.

The Health Examination Survey is designed to collect data primarily on the health aspects of growth and development. The survey is not intended as a screening procedure; referral for diagnosis is not made. The fact that the examination is not complete and is not a substitute for a visit to one's own physician and dentist is stressed with the parents of each youth examined. No part of the results of the examination except for a card stating the blood type will be disclosed to the youth or his parents. A report of relevant findings will be sent to the youngster's physician and dentist when the parents request that this be done.

The examining physicians will be senior residents or fellows in pediatrics working temporarily with the Public Health Service. Other members of the examining team will include a nurse, a dentist, two psychologists, and x-ray and other technicians regularly on the PHS staff.

This health examination of youth is referred to as the third cycle of the Health Examination Survey. Earlier, a second cycle of children's (ages 6 through 11 years) health examinations was completed last December. Over a 30-month period, a total of 7,129 children were examined in 40 locations across the nation. A first cycle of adult health examinations ending in late 1962 completed a three-year survey, and examined a total of 6,672 adults (ages 18 through 79 years).

New Administrator for IMPAC Named

Appointment of Mr. J. Kent Jerome as staff administrator of the Iowa Medical Political Action Committee was announced in late June by Otis D. Wolfe, M.D., of Marshalltown, chairman of the IMPAC Board of Directors. A 1958 graduate of Cornell College, Mr. Jerome has been employed as an account executive with The Stoner System, an outdoor advertising firm headquartered in Des Moines. Prior to this, he served for three-and-a half years as the middle-Iowa representative for the Pitman-Moore pharmaceutical division of Dow Chemical. Mr. Jerome, 29, is married, has four children and lives in West Des Moines.

As IMPAC's staff administrator, Mr. Jerome will play an important part in the coordination of a political action program based on plans and policies established by the IMPAC Board of Directors.

Mr. J. Kent Jerome

President's Page

The thanks of the officers, and of the members of the Iowa Medical Society generally, should go to the many county medical societies, the IMS Auxiliary, the individual physicians and the laymen who sent materials for inclusion in the "time capsule" that was buried at the front of the new IMS headquarters building in West Des Moines on Thursday, July 14, 1966. All of those documents and other objects will help the Iowans who unearth them, 50 or 100 years hence, to gain a clear concept of medicine and of the men and women who practiced it in the mid-twentieth century.

Within the lifetimes and even within the professional careers of many of us, the drugs and instruments which physicians have had at their command, and their success in treating acute diseases, have improved at an almost incredible rate. It would be foolish for us to predict the arrival of Utopia within the period that the "time capsule" remains sealed, but in that length of time it is altogether likely that remedies will have been found for most if not all of the chronic diseases with which we now are unhappily familiar.

But the essential quality of the medical practitioner will remain the same as it is now, and as it has been throughout the centuries since Hippocrates. That essential quality is compassion—a selflessness, a desire to preserve life and to relieve suffering, and a determination, with God's help, to do no harm.

D. P. Leinbach

President

Iowa Chapter of the American Academy of General Practice

18th Annual Scientific Meeting

All physicians are welcome and are encouraged to attend the Eighteenth Annual Meeting and Scientific Assembly of the Iowa Chapter of the American Academy of General Practice, which is again to be held at the Hotel Savery in Des Moines, on September 19 and 20. The program committee has planned an excellent scientific session, and it will be accredited for 11 hours by the American Academy of General Practice.

The annual business meeting and election of officers will be held immediately following lunch on Monday, September 19. Marion Laboratories will serve its famous Oysters and Beer during the Social Hour Monday evening, followed by a banquet and some very special entertainment which is sure to please. The luncheon address on Tuesday will be of interest to the ladies, as well as physicians, for Dr. G. M. Tice will show slides and discuss Medicine in India.

Portable TVs will be given away at the close of each day's session.

Monday, September 19

"Fractures of the Wrist"—William R. Hamsa, M.D., Omaha, Nebr.

"Practical Psychotherapy for the Non-Psychiatrist"—Beverly Mead, M.D., Omaha, Nebr.

"Normal and Abnormal Female Reproductive Physiology"—M. Edward Davis, M.D., Chicago, Ill.

"Current Concepts in Management of Cervical Cancer"—A. E. Lorincz, M.D., Chicago, Ill.

"Newer Concepts in the Management of the Menopause"—Dr. Davis

"Elbow Fractures"—Dr. Hamsa

"Surgical Treatment of Uterine Malignancy"—Dr. Lorincz

"Adolescents' Problems"—Dr. Mead

Tuesday, September 20

"One Dozen Vexing Eye Problems"—Malcolm McCannell, M.D., Minneapolis, Minn.

PANEL DISCUSSION: Diaphragmatic Hernia, Diverticulitis and Diverticulosis—W. N. Cohen, M.D., Iowa City; F. M. Owens, M.D., Minneapolis and J. R. McPherson, M.D., Rochester, Minn.

"New Developments in Ophthalmology of Interest to Family Doctors"—Dr. McCannell

"Treating the Hypertensive—When and How"—Jeremiah Stamler, M.D., Chicago, Ill.

"Sports Medicine"—Leo J. Morrissey, Iowa City, Iowa

JAMA Urges Auto Inspections

A middle-aged man is less likely to have a fatal auto accident in a state which inspects his car regularly, suggests an article in the July 4 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

If the man is white, he is less likely to die in a car crash than a nonwhite man of the same age, the article says. The reasons for this are complex, but one of the main ones may be that nonwhites generally have lower incomes, and thus driver older, more dangerous cars.

Nonwhite male drivers are more than twice as likely to have a fatal crash if they live in a state which does not inspect vehicles, compared to nonwhite residents of states which require twice-yearly inspections, the article said.

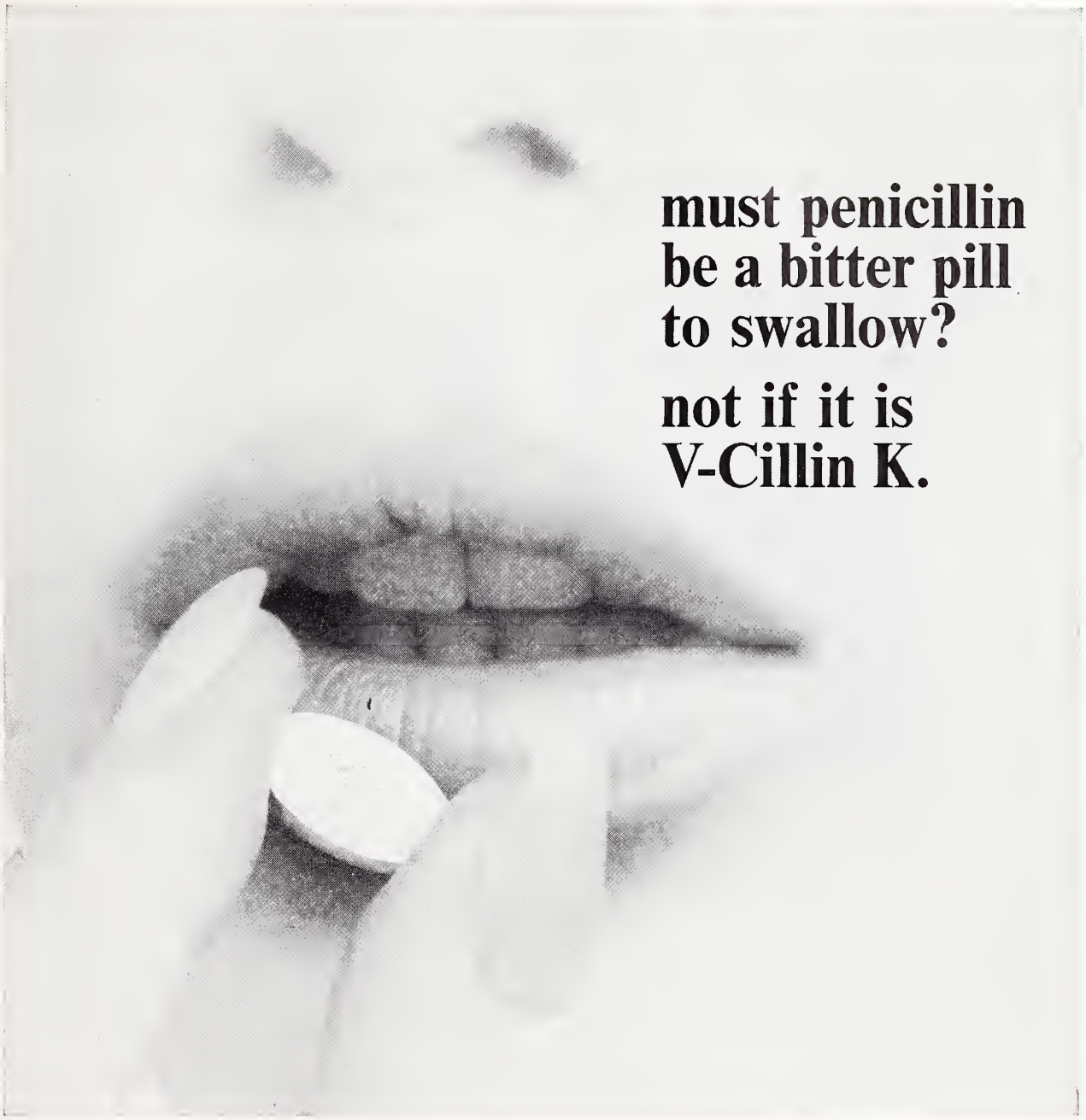
The authors, two Harvard Medical School investigators, compared auto-accident death rates in all states, and found that fatality rates were generally higher in states which did not inspect cars for mechanical defects.

The article emphasizes that no reliable method exists for determining the number of fatalities due to auto mechanical failures. The authors said their findings suggest, however, "an association between the preventive procedure of inspection and a lessening of the death rate."

Auto fatality rates vary widely from state to state. Such factors as geographic area, income, population density, the number of vehicles and the miles they are driven all affect accident rates. But no matter how states were grouped according to these factors, states which did not inspect vehicles had consistently higher auto fatality rates, the authors said.

The authors grouped states according to (1) those which had inspected vehicles for several years, (2) those which began regular inspection since 1950, and (3) those which had no vehicle inspection as of 1960, the date of the last nationwide census. Between 1950 and 1960, death rates fell about 10 per cent in states which began auto inspection in that period. Death rates increased about 10 per cent during the 10-year period in states which had no vehicle inspections.

"It is widely accepted that automobile inspection is desirable, but in 1960 the states which required inspection were in the minority, and their population was less than 40 per cent of the national total," the authors said.



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Indications: V-Cillin K is an antibiotic useful in the treatment of infections caused by streptococci, pneumococci, and sensitive strains of staphylococci.

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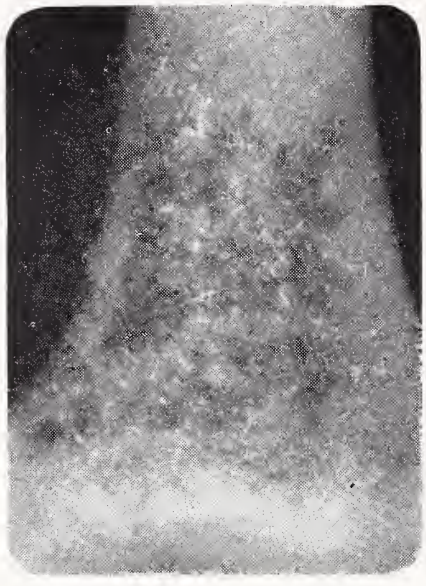
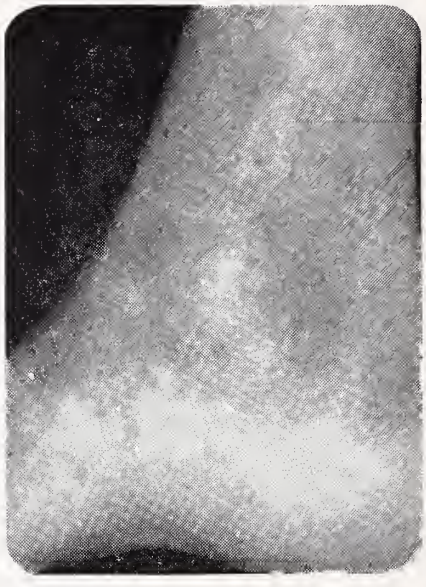


Before treatment



After treatment — with ARISTOCORT Topical Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Available in 5 Gm. and 15 Gm. tubes and ½ lb. jars.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

406-6

THE DOCTOR'S BUSINESS

Use a Corporate Trustee To Manage Your Estate

HOWARD D. BAKER
Waterloo

The average doctor spends his productive years accumulating retirement capital and an estate sufficient to provide for his family in case of his death. You are well aware of the difficulties he must overcome in making those accumulations. Taxes, bad investments and poor judgment add to them. You know the decisions, planning and worries involved.

Would your wife be able to assume similar burdens, and is it fair to expect her to do so, even if she is able? Many widows today would answer this question with an emphatic "No!" Consequently, more and more people today are turning to corporate trust departments for the management of their estates.

What do such institutions have to offer, how do they operate, and what do they charge?

(1) They will manage all or any part of an estate turned over to them by will or trust agreement.

(2) They will act as executor or trustee of the estate, assuring prompt action and proper know-how for best results.

(3) Available funds will be fully invested to produce maximum yield and safety at all times.

(4) Changes in investments will be accomplished without worry or responsibility for the beneficiaries.

(5) The estate will be in one place for management purposes, thus sparing the testator, and subsequently the beneficiaries, the necessity of dealing with several different sets of people, and will provide full co-ordination at all times.

(6) The estate can be flexible enough to meet all contingencies, and still can be kept within the goals set forth by the testator, as regards both investment policy and disbursement of funds.

(7) Funds placed with a trust department are completely apart from other bank funds. National-bank trust departments are subject to audit by federal bank examiners; adequate bonding is required; comprehensive records are required; and all investments must be approved by a trust investment committee composed of senior bank officers.

(8) The corporate trust department guarantees continuity of supervision, thus overcoming the principal disadvantage of the individual-trustee arrangement. An individual trustee may be fully competent, but if he dies or becomes disabled, his replacement may be a less capable man. With the corporate trust department, continuous expert management is not in any way dependent upon the ability or survival of one individual.

(9) Costs for executors are set by law. Fees for trust management average one-half to one per cent of the annual value of trust assets. Management of a $100,000 trust would cost about $500 per year. Such a fee is generally repaid many times over through prudence in managing the assets.

(10) With taxes and inflation, the burden of conserving an estate is an enormous one. The size of the estate is not a deciding factor; in fact, a small estate has a bigger job to do, and the responsibility for its supervision is doubly important.

If you have reached the enviable position of having an estate that is capable of fulfilling your goals, and if you have it systematically planned for minimum taxation, take another look at it from the standpoint of management. Have you provided for management which is the most capable and continuous available, and which will impose the least worry and responsibility upon your loved ones?

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Iowa Association of Medical Assistants

PR . . . PR . . . PR . . . PR
THE MAGIC WORDS

The doctor's secretary or medical assistant has far more contacts with patients, both in person and over the telephone, than the secretary in a business office usually has with customers. The good will of the patient toward the doctor can be enhanced or diminished by the assistant. You can appreciate, therefore, the importance of your attitude and conduct in your relations with patients and other callers in the doctor's office.

Situations requiring tact and diplomacy arise repeatedly in the course of the assistant's contacts with patients and other callers. Basic precepts govern the handling of these situations, but the skill with which those precepts are applied varies with the assistant's personality, with the office in which she works, and with the individual patient or caller. The following suggestions and fundamental instructions may help you in knowing how to handle difficult conversations with people in person and over the telephone.

CONTACT IN PERSON

Good manners, judgment and discretion should control your attitude. Your tone of voice should always be warm, cordial, and respectful, but without subservience. Your employer will expect you to observe the following principles, for they are required in all offices:

1. Never discuss one patient with another.
2. Guard against showing aversion for any physical condition the patient may have.
3. Never give medical advice.
4. Gain the good will of the patient, and make his contact with your office as pleasant as possible.
5. Never let your knowledge of a patient's financial condition color your attitude toward him.
6. When your doctor is late for an appointment, tactfully explain the delay to the patient.

SEE YOUR OFFICE THROUGH THE EYES OF THE PATIENT

Treat the patient in the office as you would a guest in your home. Your house is tidy, you have prepared food and have done other tasks well in advance so that you can spend more time with your guests. So let it be with the patients in your office. Do not wait until they arrive to clean your office, to pull your history cards, and to prepare the examining room for them. Plan a work schedule to fit your needs.

COURTESY BEGETS COURTESY

When greeting a patient, always address him or her by name. A glance at your appointment book will remind you. To a new patient, you might say, "Good morning. Are you Mr. Williams?" Then, be sure to introduce yourself. Show the patient where to hang his wraps, and help him if he is disabled. Ask the patient to be seated near your desk. Obtain the needed information tactfully, by providing a printed form which the patient may complete by writing in the answers.

All patients, new or regular, with appointments or without, must be greeted cordially and made to feel that you are glad to see them. It is just as important to say "Good bye" as the patient leaves the office . . . AND always to say it with a smile.

THE DISRUPTED APPOINTMENT SCHEDULE

When the doctor is late, and circumstances frequently make him late, your appointment schedule is upset. If the doctor is going to be an hour late and you know it, explain the situation to the patient. It is better to be frank than to keep saying, "The doctor will be here in a few minutes," when you know better. Occasionally an out-of-town patient may have to miss a bus or train because of the office delay. If so, he will be most grateful to you for finding out the time of the next bus or train. If there are no later means of transportation that day, and the patient must forego seeing the doctor, *humbly* offer to make another appointment.

Most patients recognize an emergency and are eager to cooperate. They deserve a sign of appreciation when the unexpected has been cared for and the work flow is back on schedule. A "Thank you for helping" makes the waiting patient feel important.

PHONESIDE MANNER

Telephone contacts are of paramount significance in a doctor's office. As a medical assistant or secretary, you must know how to answer and make calls smoothly, how to talk into the instrument, and how to take messages for the doctor, as well as what to say over the phone. Your tone of voice is especially important because you cannot show your interest by your facial expressions. Your voice should convey to the listener the

warmth and friendliness of your personality. The following "Telephone Courtesy Tips" are well worth repeating:

1. Answer all calls promptly. The phone in a doctor's office should never be left unattended.
2. Do not begin to answer the phone while you are in the process of taking the phone off the hook.
3. Keep pad and pencil, as well as your appointment book, handy.
4. If it is necessary to look up some information, politely ask the caller to wait, and when you return to the phone thank him for waiting. If it will take you some time to get the information, ask him if you may call back.
5. If you put the receiver down for any reason, do it gently.
6. Listen attentively. Do not make the caller repeat because of your inattention.
7. When the conversation has been completed, say, "Thank you for calling, Mrs. Jones," or "Good bye" pleasantly, and replace the receiver gently. Let the caller hang up first.

When you place a call for the doctor, be sure your employer is ready to talk, and when the call is answered, make the connection immediately.

The medical secretary or assistant is usually expected to screen incoming calls for the doctor. When another doctor calls, professional courtesy requires that you connect your doctor immediately, if possible. Calls from patients are not put through when the doctor is with another patient except as the doctor has instructed, or in emergencies. The reason for this practice is two-fold: (1) It is most annoying to the patient who is with the doctor to have his consultation interrupted. (2) The doctor does not like to discuss one patient's case in the presence of another. Tell the caller that the doctor will call back, and give an approximate time. Reserve an interval in the day's schedule for phone calls.

Nowhere in the world is it more important to practice good PR, than right in *your* office. Public relations for the medical assistant can be summed up as a matter of attitude, your attitude toward the patient, toward the profession, your community, your job, and yourself. Your knowledge will profit you little indeed if your spirit is not made humble and your hand made gentle by human compassion.

—*Marian Little*

The national first prize in the 1966 essay contest of the American Association of Physicians and Surgeons—a check for $1,000—was presented by Mrs. R. E. Hines, of Des Moines, president of the IMS Woman's Auxiliary, to Miss Susan Miller, of Oelwein, in a ceremony on May 26 at the new IMS headquarters building in West Des Moines. Miss Miller's essay was published on the "green sheet" in the July JOURNAL. From left to right, are Mrs. Hines; Mr. George Miller, the young lady's father; Miss Miller; Dr. S. P. Leinbach, the IMS president; Mrs. George Miller; and Mrs. Glen Nielsen, of Des Moines, the IMS Auxiliary's essay-contest chairman.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Gamma Globulin Distribution

In May, the American National Red Cross announced to all state departments of health that because of limited supplies of gamma globulin, it had found it necessary to change its method of distributing that material. Beginning July 1, consequently, there has been no free distribution of gamma globulin from departments of health to physicians. However, arrangements have been set up by the Red Cross to provide it to doctors for two types of patients:

"The Red Cross will continue to make gamma globulin available without cost to physicians for patients requiring long-term therapy. Until such time as an Ad Hoc Medical Committee can be convened to establish criteria for such patients, those being treated for agammaglobulinemia and dysgammaglobulinemia will be considered as requiring long-term therapy.

"The Red Cross will continue to provide gamma globulin without cost for disasters, epidemics and approved research. In addition, gamma globulin will be available to appropriate federal and state authorities at a reimbursement rate of 60c/ml., which will recover a portion of the cost to the Red Cross for processing the derivative."

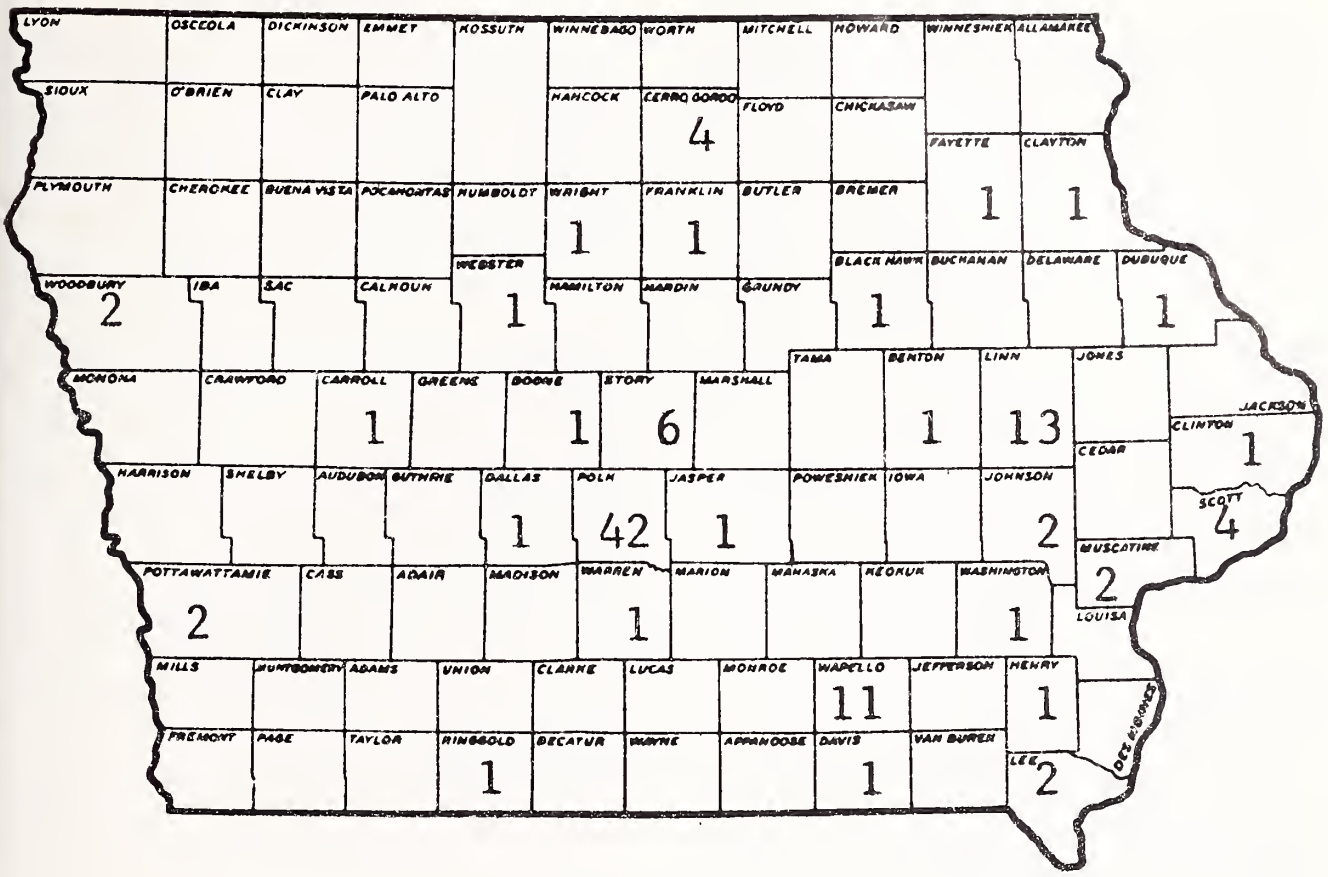
Physicians requesting gamma globulin from the Red Cross for treatment of patients with agammaglobulinemia or dysgammaglobulinemia should, as they have been doing during the past couple of years, write directly to the Administrative Director, Blood Program, American Red Cross, Midwestern Area, 4050 Lindell Blvd., St. Louis, Missouri. In letters with their requests they should give the following information regarding their patients: (1) Name and address of patient; (2) a brief clinical history including age and weight of patient; (3) pertinent laboratory data, including an electrophoretic analysis of the patient's serum in agammaglobulinemia or dysgammaglobulinemia; and (4) the anticipated amount of gamma globulin needed for one year.

The State Department of Health is still able to supply limited amounts of gamma globulin, but it will be necessary for physicians to check closely the amounts they need of it to assure the best and most extended use of the Department's small supply. The Department hopes to find funds with which to purchase gamma globulin, so that it can again make it available to physicians for low-income patients.

Morbidity Report for Month of June, 1966

Diseases	1966 June	1966 May	1965 June	Most Cases Reported From these Counties
Diphtheria	0	0	0	
Scarlet fever	488	679	186	Bremer, Johnson, Marshall
Typhoid fever	0	1	1	
Smallpox	0	0	0	
Measles	705	1,064	512	Carroll, Clay, Muscatine, Scott
Whooping cough	10	2	4	Cerro Gordo
Brucellosis	1	1	9	Linn
Chickenpox	618	655	305	Carroll, Monroe, Muscatine, Polk, Story
Meningococcal meningitis	2	3	1	Black Hawk, Dubuque
Mumps	286	509	501	Allamakee, Muscatine, Scott, Warren
Poliomyelitis	0	0	0	
Infectious hepatitis	49	59	27	Clinton, Des Moines, Dubuque, Polk
Rabies in animals	14	17	17	Allamakee, Carroll
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	28	29	15	For the state
Syphilis	76	93	64	For the state
Gonorrhea	239	215	150	For the state
Histoplasmosis	3	0	0	Iowa, Lee, Taylor
Food intoxication	0	0	0	
Meningitis (type unspec.)	5	2	0	Dallas, Iowa, Muscatine, Sac, Scott
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	7	7	5	Story
Tetanus	1	0	1	Hardin
Chancroid	0	1	0	
Encephalitis (type unspec.)	0	0	1	
H. influenzal meningitis	2	1	1	Floyd, Linn
Amebiasis	3	0	0	O'Brien
Shigellosis	3	1	3	Wapello
Influenza	717	3,657	53	Boone

Iowa Human Salmonellosis Cases



SUMMARY OF CASES BY AGE GROUPS

Age Group	Polk County	Rest of State	Total Entire State
Under 1	3	9	12
1-5	9	14	23
6-10	15	2	17
11-20	2	4	6
21-30	1	2	3
31-40	0	1	1
41-50	0	8	8
51-60	1	9	10
61-70	4	5	9
70+	1	4	5
Age unknown	6	8	14
Total	42	66	108

The 108 cases with division into 20 serotypes were scattered statewide in 29 counties. The only group of related cases occurred in Polk County where, of a total of 42 reported, 24 (serotype-typhimurium) were among pupils of one elementary school and members of their families. The initial case was not identified until the infection had appeared in other children in the school. Of these 24 cases, 14 were in pupils, seven in pre-school children, and three in adult family members. This group of cases accounts for the large number of Polk County cases (27 of 36 of known age) below the age of ten years. They also reduce the average case age for the state for 1965.

Preliminary reports indicate 68 salmonellae isolates were recovered from non-human sources (mostly animals) in Iowa during 1965. These included 10 heidelberg, 10 infantis, 9 typhimurium, 7 saint paul, 7 cerro, 5 chester and 15 other serotypes. It will be noted that heidelberg, typhimurium, saint paul and infantis were recovered from both human and non-human sources. This emphasizes the complex epidemiology of salmonellosis.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

Serotype	1965 Total—108 County
Anatum (2)*	Story (2)
Blockley (2)	Franklin
	Story
Branderup (1)	Scott
Enteritidis (1)	Muscatine
Heidelberg (5)	Black Hawk (1)
	Dubuque (1)
	Jasper (1)
	Johnson (2)
Hirschfeldii (1)	Fayette
Infantis (3)	Linn (2)
	Wapello (1)
Java (1)	Wapello
Montevideo (2)	Linn
	Polk
Newington (3)	Linn (2)
	Polk (1)
Newport (5)	Linn (3)
	Polk (1)
	Woodbury (1)
Panama (1)	Lee
Paratyphi B (2)	Polk
	Pottawattamie
Saint paul (3)	Polk
	Story
	Wapello
San diego (2)	Polk
	Washington
Thompson (1)	Polk
Typhimurium (60)	Benton (1)
	Boone (1)
	Carroll (1)
	Cerro Gordo (3)
	Clayton (1)
	Dallas (1)
	Davis (1)
	Henry (1)
	Lee (1)
	Linn (5)
	Muscatine (1)
	Polk (30)
	Pottawattamie (1)
	Ringgold (1)
	Scott (1)
	Story (2)
	Wapello (6)
	Webster (1)
	Woodbury (1)
Typhimurium (Var. copenhagen) (8)	Cerro Gordo (1)
	Clinton (1)
	Polk (3)
	Wapello (2)
	Wright (1)
Group B (3)	Scott (2)
	Warren (1)
Type unspecified (2)	Polk

* The number in parenthesis shows the total number of that particular serotype for the entire state.

Prevention and Control of Hospital Infections

The Iowa Medical Society is co-sponsoring a short course in the prevention and control of hospital infections being given by the Iowa State Health Department and the U. S. Public Health Service, September 19-21 in Des Moines. Other sponsors are the Iowa Hospital Association and the Iowa Nurses Association.

Purpose of the course is to define the problems presented by infections in hospitals and methods for control. These infections involve approximately 5 per cent of all hospital admissions in this country with some infection rates as high as 15 per cent. Responsibilities of administrators, department supervisors, physicians and other staff members will be discussed. Specific control measures such as hospital infections control committees and surveillance systems will be outlined.

The course is designed for hospital administrators, chiefs of services, nursing directors, health officers, hospital consultants, institutional advisors and faculty members from medical and nursing schools. Regional follow-up courses will be held in a number of Iowa communities for all types of hospital personnel.

For more information and registration forms, write to the Iowa State Health Department, State Office Building, Des Moines. Registration for the course must be made by August 19.

Sudden Infant Death Syndrome

A search for the cause of death for 10,000 to 20,000 babies per year in the U. S. has been launched under a contract between the National Institute of Child Health and Human Development, and the Children's Hospital Research Foundation of the District of Columbia. These babies die very suddenly and without previous indications of illness or distress, at between two and four months of age. Death usually strikes in the early morning, and occurs within five minutes.

The Washington scientists will be looking for a virus or combination of viruses that might be involved. They will also concentrate on studies of immune responses. This work will help determine whether a lack of immunity to one or more infections may be causing death. Researchers in other cities are also conducting studies of the problem, but most of them are concentrating on finding a single cause. The Children's Hospital team, however, will be looking for combinations of factors that may be responsible for the deaths.

Their studies will include virology tests on postmortem specimens, laboratory tests of throat swabs and other specimens both from the deceased infant and from the members of his immediate family, and the collection of epidemiologic data to see whether there are any environmental factors.

Coming Meetings

(Continued from page 804)

Oct. 6-9	**14th French National Congress on Preventive and Social Medicine,** Strasbourg, France.
Oct. 7-9	**International Symposium on Coronary Circulation and Energetics of the Myocardium,** Institute of Experimental Cardiology, Milan.
Oct. 10-15	**8th Latin-American Congress of Anesthesiologists,** Caracas, Venezuela.
Oct. 11-13	**International Symposium on Physical Activity and Cardiovascular Health, Ontario Medical Association and Ontario Heart Foundation,** Toronto.
Oct. 13-19	**6th Congress International Academy of Pathology,** Kyoto, Japan.
Oct. 14-18	**Interamerican Association of Gastroenterology,** Madrid.
Oct. 17-19	**Annual Meeting German Society for Hematology,** Berlin.
Oct. 17-22	**20th Austrian Physicians Congress,** Vienna.
Oct. 23-29	**9th International Cancer Congress,** Tokyo.
Oct. 24-26	**16th Annual Scientific Meeting, Otolaryngological Society of Australia,** Sydney.
Oct. 24-28	**Australian College of General Practitioners,** Adelaide, South Australia.
Oct. 24-28	**15th Pan-American Congress on Tuberculosis and Respiratory Diseases,** Buenos Aires.
Oct. 25-29	**53rd Annual Meeting, German Orthopedic Society,** Hamburg.
Oct. 25-29	**2nd Latin-American Congress of Allergology,** Quito, Ecuador.
Oct. 28-29	**5th French National Congress on Sports Medicine,** Tours, France.
Oct. 29-Nov. 3	**Congress on Pediatrics, 8th Pan-American, 1st Latin-American, and 11th Mexican,** Mexico City.
Oct. 29-Nov. 4	**2nd Conjoint Meeting, Australian-New Zealand Ophthalmological Societies,** Rotorua, New Zealand.
Oct. 30-Nov. 5	**5th World Congress of Cardiology,** New Delhi.

Wisconsin's Museum of Medical Progress

How well do *you* hear? Why wear a hearing protector near certain machinery in the plant or on the farm? Why is it important to see your physician first if hearing loss is suspected? What can the doctor do to help accommodate the hard-of-hearing?—These are some of the questions answered by the exhibit on hearing recently installed at the Museum of Medical Progress of the State Medical Society of Wisconsin, at Prairie du Chein. It was donated by Employers Mutual of Wausau, and joins nearly 100 others that illustrate the advances from Indian folk remedies to space-age medicine.

The demonstration begins with an audio-visual explanation of the basic structure of the human ear. It describes the functions of the outer, middle and inner ear, and explains some of the causes of hearing problems in each of them, such as impacted ear wax, perforated ear drum and continued exposure to loud noise.

Noise and how it must be guarded against is the topic of the second segment of the display. We are told how some noise is harmful, and how to control the noise around us.

The remaining three sections discuss how the physician determines hearing loss; how one can protect himself against ear damage by outboard motors, tractors, chain saws and rifles; and the progress that has been made in hearing aids from the days of ear-trumpets to the miniaturized instruments of today.

With all of its exhibits, the Museum of Medical Progress is a delightful goal for a drive along Wisconsin's rolling hills beside the Mississippi. The Museum consists of three buildings on the site of Fort Crawford, a military post dating back to 1829.

The displays include:

- Full-sized settings of physicians' offices of 1850 and 1900.
- An exhibit on William Beaumont, M.D., who conducted experiments, in 1830, on "the man with a hole in his stomach," thus pioneering in the field of the physiology of digestion.
- "The Transparent Twins"—lifesized female models with "skin" of clear plastic, that facilitate an audio-visual explanation of the organs and the nervous and skeletal systems.

Betatron for U. of Nebraska Medical Center

The University of Nebraska Regents have announced a $530,795 grant from the Eugene C. Eppley Foundation to help construct and equip the Eugene C. Eppley Center for Radiation Research at the College of Medicine in Omaha. The grant will also partially endow three Eppley Professorships in the field of cancer.

The Center for Radiation Research will extend the capability of the Eugene C. Eppley Institute for Research in Cancer and Allied Diseases at the College of Medicine. The Cancer Institute was the beneficiary of an initial $2,500,000 Eppley Foundation grant to build, staff and equip the institute in partnership with the University of Nebraska and the federal government.

The Radiation Research Center will be located in a new underground structure south of the Eppley Institute and north of the Radiology Department of University Hospital. The most expensive piece of new equipment will be a betatron, able to deliver high-energy photon and electron beam therapy up to 25 million volts to cancers located deep in the body and to certain cancers overlying sensitive structures, such as the brain or lungs. The betatron enables precise positioning and high localization of the cancer-killing energy. The cost of the betatron and auxiliary equipment will exceed $266,000. Facilities for experimental work with hyperbaric oxygen are planned in the Institute.

Since it takes 12 to 18 months for construction and delivery of a betatron, the target date for putting the Radiation Research Institute into full operation is two years away.

half OF ALL BLINDNESS

IT IS ESTIMATED THAT:

★ 416,400 Americans are already blind.

★ During the next 12 months another 32,700 persons will lose their sight.

★ More than one and a half million Americans over age 35 are threatened with blindness from glaucoma.

★ More than 12,235,900 school children need some form of eye care.

★ Only 10 per cent of the 97,900 partially seeing students have the proper educational facilities.

★ 161,500 school children are threatened with blindness or vision damage from eye injuries each year.

To meet this challenge the National Society carries on a comprehensive program of community services, public and professional education and research.

Our objective is to save sight and to prevent blindness. However, this cannot be done alone. **WE NEED THE HELP OF ALL PHYSICIANS.**

The Society has a range of pamphlets on eye health and safety for the lay public which can be distributed to your patients. Write to the National Society for the Prevention of Blindness, 16 East 40th Street, New York, N. Y. 10016 for a free catalogue.

IS PREVENTABLE

Woman's Auxiliary News

From the President

Your president hopes that each of you will have an opportunity to attend a National Auxiliary Convention. It is an inspiring and gratifying experience to meet and visit with the many talented Auxiliary members from the 50 states. It is particularly pleasant to meet the members with whom one has corresponded, and thus I was especially glad to meet Mary Mantz, the national parliamentarian, since parliamentary law is one of my avocations.

One of the main items of business consisted of major structural revisions in the Bylaws. These included an increase in the number of national directors from six to 12, and the creation of three categories of committees: Standing, Program Extension and Special. Further, there were some changes in the requirements for election to national office.

The "package program" approach (Umbrella Project) for implementation of the National Auxiliary project "Health of Children and Youth of School Age" was presented by the Community Service chairman, Mrs. Howard Ellis, of Des Moines. The two "package programs" on teen-age venereal disease were previewed. Dr. Daniel Bergsma, medical director of the National Foundation and former New Jersey Commissioner of Health, spoke on the incidence and contributory causes associated with the alarming increase in teen-age venereal disease. He stressed the need for public education programs and the importance of helping youth to develop good attitudes toward sex. As one cause for the spread of venereal disease, he cited the fact that judgment and wisdom develop later than the ability to learn facts. For information on the seven different package programs available for county Auxiliary use, in conjunction with the national projects, contact your state or regional Community Service chairman.

Dr. E. B. Howard, AMA assistant executive vice-president, gave a round-up report on actions of the AMA's House of Delegates regarding Medicare. He urged doctors to adopt the direct billing approach, and encouraged them to participate in utilization review. The doctor's concern for the patient must always come first, demonstrating clearly that it is the patient's best interest that he seeks. Please visit with your husbands so that you will be well informed on the problems as they arise.

You will hear from your Legislation chairman regarding methods whereby the Auxiliary can assist the medical profession in the legislative field. We must take more interest in the people we are electing to represent us, and an organized approach is essential. I want to invite all of you to participate in IMPAC (Iowa Medical Political Action Committee) and AMPAC (American Medical Political Action Committee).

Thank you for sending me to the National Convention, and I hope that I shall be able to inspire each of you a bit as we meet during this year.

MRS. RALPH E. HINES, *President*

Twenty-Five Years of H.E.L.F.

Mrs. B. F. Kilgore, Mrs. J. G. Fellows, the H.E.L.F. treasurer, and Mrs. R. H. Heise, the current H.E.L.F. chairman, participated in the following presentation, with Mrs. M. E. Olsen acting as moderator of the panel. Mrs. Roy Sebek, the first loan recipient, and Miss Dorothy Haven, a 1966 recipient, were guests at the luncheon. A standing ovation was given to Mrs. William Hornaday, who had charge of the program during its early years.

Our president's theme for this annual meeting, "Planning, Participation and Progress," seems especially appropriate to the story of the first 25 years of H.E.L.F., the Iowa Auxiliary's Health Education Loan Fund. There was a Planning time, there has been continuous Participation, and you will decide the Progress.

The late Dr. Albert Schweitzer wrote: "Open your eyes and look for some man, or some work for the sake of men which needs a little time, a little friendliness, a little sympathy, a little human toil. See if there is not some place where you may invest your humanity."

Mrs. William Hornaday, of Des Moines, and the 1941 officers had a similar inspiration. They thought it was expedient to develop a worthy project in which all the county Auxiliaries might participate and at the same time serve their community needs. Until that time, county Auxiliaries had existed purely for social reasons—to cultivate friendly relations and to promote mutual understanding among physicians' families. Those objectives were important in that day, just as they are today, but aware of the shortage of nurses, they believed a project offering financial assistance to young

women interested in nursing would be timely and beneficial to humanity. Thus the Nurses Loan Fund, endorsed by the Woman's Auxiliary Advisory Committee of the Iowa Medical Society, became a reality at the annual meeting of the Auxiliary in April, 1942.

The WOMAN'S AUXILIARY NEWS for April 15, 1942, carried a state convention report which said, "The Convention ratified the action of the 1941 fall Board meeting in establishing a loan fund for student nurses, and empowered the incoming president to appoint a committee of three to arrange details for handling the funds."

In the president's report in the May, 1942, AUXILIARY NEWS, Mrs. Hornaday wrote: "Our biggest undertaking this year, 1941-1942, was the starting of a Nurses Loan Fund to help girls complete their training if at any time that goal seemed impossible for financial reasons. We are starting from 'scratch,' but with the support of each and every doctor's wife we shall be able to help Uncle Sam fill his quota of nurses. We are also interested in helping the nurse find enjoyment during her leisure time by having dramatic classes, chorus work, etc." The treasurer's report indicated $34.25 in the Fund. That was the Planning time.

For the next eight years, Mrs. Hornaday served as chairman of the Nurses Loan Fund Committee. It was during those years that the county Auxiliaries and members-at-large began sending 50¢ per member to this Fund annually. Many county Auxiliaries and members-at-large are still doing so at present.

Then, in April, 1947, the national president, Mrs. Jesse D. Hamer of Phoenix, Arizona, was a guest at our annual meeting, and she suggested that student-nurse recruitment was an important objective for Auxiliaries. At the same meeting, our House of Delegates endorsed incorporation of the student-nurse recruitment project into the active program of each county Auxiliary. The Nurses Loan Fund Committee then became The Nurse Recruitment and Loan Fund Committee, thus giving additional honor and responsibility to Mrs. Hornaday as the first chairman of the combined projects. The treasurer's records showed the amount of $438.57.

PANEL PARTICIPANTS IN "25 YEARS OF HELP"

Back row: Mrs. J. G. Fellows, Ames; Mrs. R. H. Heise, Story City; Mrs. M. E. Olsen, Minden; and Mrs. B. F. Kilgore, Des Moines. Front row: Miss Dorothy Haven, a 1966 loan recipient; Mrs. W. R. Hornaday, Des Moines, the first chairman; and Mrs. Roy Sebek, Fort Dodge, recipient of the first loan.

In January, 1948, the records indicate that the first loan of $400 for a period of three years was made to Miss Helen Westvold, of Huxley, who was attending Lutheran Hospital School of Nursing.

The treasurers of the Auxiliary handled the funds of this Committee until 1953, when the Board recommended that the Committee have its own treasurer to handle the growing funds and increased responsibility in granting loans.

Future Nurses Clubs were being organized, and there was too much work for The Nurses Recruitment and Loan Fund Committee, so in 1958 the Committee was divided into (1) The Health Education Loan Fund Committee, and (2) The Careers Recruitment Committee. Twenty-four girls had received loans.

The Health Education Loan Fund is maintained through annual gifts from county Auxiliaries, through the annual H.E.L.F. dance during the annual meeting, through gifts from members-at-large, and through memorials. Have you or your Auxiliary been a part of this wonderful project? The mounting costs for tuition demand that our present loans far exceed those of earlier years.

Financial assistance has been granted in the form of loans to 73 students in health-career fields. At the present time 15 students are loan recipients, and the total worth of the fund is $20,000. If you recall, we started from "scratch" in 1941. Would you conclude that there has been progress? If you should be confronted with the question of whether the Auxiliary does anything worthwhile, you have heard the story of the Health Education Loan Fund project, and you can supply the answer. Surely we can say that there has been Planning, Participation and Progress during these 25 years.

The Auxiliary members, in addition to Mrs. Hornaday, who have served either as chairman or treasurer of the Fund during its first 25 years are richly entitled to our thanks. They are Mrs. Carl Hansen; the late Mrs. Dean King; Mrs. E. A. Larsen; Mrs. A. E. Merkel; Mrs. H. W. Dahl; the late Mrs. Malcolm Royal; Mrs. Dwight Wirtz; Mrs. William Chase; Mrs. Bruce Howar; Mrs. Howard Smead; Mrs. Henry Decker; Mrs. Howard Smith; Mrs. A. W. Puntenney; Mrs. G. A. Paschal; Mrs. Noble Irving, Jr.; Mrs. H. C. Merillat; Mrs. W. H. Longworth; Mrs. J. G. Fellows; and Mrs. R. H. Heise.

—MRS. B. F. KILGORE

We Are Growing

Since the Membership Report was published, at the time of the Annual Meeting, we have received 25 more memberships. Our final count for 1965-66 is 1,314 members. That is 47 more than last year, and we now have more than 1,300 members for the first time.

We are very pleased with the results. Our thanks go to the county treasurers and councilors, and of course to all other members who helped.

Enthusiasm, continued thoroughness, and an early start should help maintain this growth trend in 1966-67.

Your Treasurer and
Your Membership Chairman

Mrs. Asher Yaguda's Address To the Iowa Auxiliary

Mrs. McMillan, in her report as your state president, stated: "Our long-term goal is 100 per cent membership in every county in Iowa." She further noted, "Through community service, as Auxiliaries and as individuals, we help to prove medicine's concern for the welfare of the community," and she mentioned projects in all areas of community service.

The following year, Janet Ellis reported your county Auxiliaries had worked effectively on "projects which complimented or augmented their respective medical societies' objectives, and for which there was a demonstrated need." Janet told about the "mighty eight" in Palo Alto County and much about your sale of items made by handicapped persons. I like your interest in medical students from foreign lands, and your kindness to them.

In reviewing these reports and keeping up-to-date through Mrs. Boe's messages in the WOMAN'S AUXILIARY NEWS, I get a feeling of REAL vitality as the prime essence of your Iowa Auxiliary. This is reflected in your worthwhile accomplishments. Your programs have the basic elements so essential to effective Auxiliary action—the ability to solve health problems. I am happy to see this, for these qualities are essential to our planning for the coming year.

I assume you will be interested in hearing some of the plans for 1966-67. Suppose we talk of them first, and then we can go on to what is happening at national level.

"Joining and taking an active part in the Woman's Auxiliary could very well be ranked as the first activity which any physician's wife should assume outside her home. The immediate welfare of physicians and their families and the future of medical practice depend upon what the public thinks and does with regard to medical practice and health activities. Organized medicine exists largely for the scientific advancement of its members, the betterment of the profession, and proper guidance of health activities. Except for scientific education, practically every purpose of organized medicine can be as well, or better, accomplished by a Woman's Auxiliary than by a medical society itself."

The foregoing is a quote from the "Iowa Leaflet," which was distributed in packets to all your country Auxiliaries during the early 1930's.

This echo from the past, plus obvious AMA encouragement in health-education activity, casts us in the role of educating the public and molding public opinion health-wise. This is an area in which the state and county Auxiliaries are very effective. Fortunately, this continues as our assignment. For the coming year, the emphasis will be on simplifying and focusing the program content on specific health problems and under definite project titles, "Umbrella Projects."

"Umbrella Projects" represent a consolidation of committee effort toward an overall goal. Under the proposed plan, the community service chairman will undertake a coordinating role, and in addition will assume responsibility for covering the topics not covered by other committees. This need not detract from the autonomy of the other committees. The plan merely puts to use the existing Auxiliary committee structure, with each committee taking its logical place within the desired program goal.

Let us consider Health Education Project #2—Health of Children and Youth of School Age. In this umbrella project there are six programs which will be offered as package programs; 1) Teenage Venereal Disease, 2) Immunization, 3) Mental Health, 4) Safety, 5) Health Careers, 6) Developing Good Health Habits. Each will include a film, a paper written by a physician (It is desirable to have a physician speaker if the audience size warrants—otherwise, the paper can be read), a question and answer sheet and pamphlets for the audience to take home. An audience tally form, as part of the package, will maintain an ongoing record of the number of persons reached.

Assuming that you have a local problem which falls into the category of Health Education Project #2, the appropriate package program can be presented at schools and elsewhere where children and youth congregate. It should be offered also to parent and other adult community groups. Obviously, the approaches may differ. AMA film library and health education materials will be used, and lists of other sources of pertinent materials supplied. We assume the cost of shipping the films, but the purchase of health education pamphlets would be the responsibility of the Auxiliary presenting the program. This will be nominal.

It is possible that Health Education Project #2 does not contain the type of program material you need for your particular health problem. It may prove advantageous for us to expand the number of package programs in this project. At this time we are considering the addition of a program on alcholism education. Whatever is necessary to improve the health of this age group and to remove health hazards from their lives can be a part of the project. The advantage is that we shall be working toward a common goal—one which has been explored and shown to be needed.

DIRECT SERVICE PROJECTS—these are programs designed to aid the individual with his particular health problem, and they warrant our attention. I am suggesting that the Auxiliaries should explore direct-service projects especially for the home-bound and the elderly. Projects of this type accomplish miracles and stand out in bold relief in local communities—needed, appreciated and useful.

The President's Council on Aging, reporting in 1963, stated that there are eighteen million older Americans. The older American is different in only one respect from all other Americans. He has more years behind him. He may have special needs because of those years. So may we all, when the years of our lives accumulate.

Thus, when age makes its unavoidable demand upon our bodies, we may need help from our neighbors. If we can no longer live alone, we may want a specialized home, but one that is a *home* and not just an institution—or we may want to stay in our house and hope that others will continue to make our house a home. Again, the older American, despite his age, wants to live like the rest of us—in a home—his own home, if possible. If not, a place that he can call home. Is this asking too much?—To live at home?

Direct-service projects will ease the burden of illness for the home-bound of all ages, and most especially for the elderly. These projects supply the services that make a house a home. There are three projects which we hope will engender some response from the state and county Auxiliaries: Homemaker Service (not new to you, for Iowa has seven such agencies), Volunteer Friendly Visitor Training, and Meals on Wheels—all are in short supply in the face of growing demand. The direct-service project is designed to aid the individual, but still it must be an organized program, usually an agency, and someone or some group must assume responsibility for its ongoing operation.

We plan to develop these three services, and to provide an outline of approach and implementation especially for Auxiliary action. The development will be in the hands of specific national chairmen, working as planning and resource chairmen.

Certainly, the health needs of our citizens are not static, nor should our Auxiliary programs be static. The national proposed bylaws will provide a more flexible structure than we have had at national board level. It will permit study in depth—as much as one year in advance—of health problems common to all areas of the country, and on these the national program suggestions can be promulgated. It might be we would choose to work on water pollution one year, and on prenatal examinations the next year, or these might run concurrently. The important aspect is that there be

choice, within the program selection, for local Auxiliaries to solve local health problems.

There is nothing that would preclude an Auxiliary from turning its back on all national program suggestions. However, that for the sake of progress, we hope that we can begin to do things more collectively, more cohesively, so that we may have a definite Auxiliary image throughout the country.

So much for the 1966-67 forecast. We hope it sounds exciting to you.

What is going on now at national level?

A word about philanthropy—philanthropy is a noble concept, but it is on the defensive today. Large segments of what used to be philanthropy are now the property of the government. Consider welfare programs and social welfare planning. In our own communities, we used to take care of our poor, disadvantaged families. This was seldom a planned benevolence, but these families were supplied with food and fuel and were encouraged to work to improve their lot in life. Now the neighborliness is gone—the great programs (welfare) are now administered by federal, state and local government. No longer a philanthropy, it is now really big business.

This brings us to AMA-ERF, our major national philanthropy. I note your increased contribution to AMA-ERF—congratulations!! Your North Central ERF Region shows the largest increase ($10,000) for the first six months of this year. Your state increase is sixth in size in the group of 12 states which comprise this region. Let's keep up the good work and make this the best year ever for ERF. We cannot afford to do otherwise, with the federal government in the wholesale student-loan-fund business.

According to a recent bulletin from Genie Murphy, national Legislation chairman, there is considerable Auxiliary activity in support of S-2191 (Civil Commitment of Narcotic Addicts in Lieu of Criminal Prosecution).

More than 3,000 Precinct Action Course books have been requested by the Auxiliaries. Many of the state Auxiliaries are interesting themselves in state health legislation. At the Kentucky annual meeting, a list of pending state health bills was distributed to county officers. We realize that legislatively this is the lull after the storm, but amendments to the Medicare Law continue to be observed in medical circles. This is a fine year to accelerate activity on the Precinct Action Course.

The dues increase voted by the Auxiliary House of Delegates in June, 1964, will make possible a somewhat expanded 1966-67 budget. The national board promised more services to the constituent Auxiliaries, and is already delivering them.

Four regional workshops were held last fall. The dates and locations of this year's workshops have been sent to the state presidents. We hope the Auxiliaries will have the full allowable complement of attendees at the meetings. They provide wonderful leadership training, especially when the states follow-up with their own regional workshops, as so many have done. The AMA generously subsidized the workshops, with the understanding that the Auxiliary would assume responsibility, as it is prepared to do.

We glow with pride over our special magazine for all auxiliary members, MD'S WIFE. We believe the newsletter for Auxiliary leaders, DIRECT LINE, is the ultimate in communications. Here, too, MD'S WIFE has been partially supported by AMA and now the Auxiliary will take over.

The national board, through a special committee, has been evaluating program and procedures in order to streamline its organization. The recommendations can be found, as proposed bylaws changes, in the May issue of MD'S WIFE. If voted on affirmatively by the House of Delegates at convention in June, the bylaws will provide the following (among other things): The number of directors on the national board will be doubled, thereby increasing state representation; the national chairman will meet twice a year with the board; the number of national standing committees will be reduced, permitting flexibility in the appointment of program-extension committees as needed for special projects; and there will be a re-alignment of qualifications for national office.

The 100 per cent husband-wife-team membership plan is moving steadily. At this point, with the reports going in to national, we do not know how many state and county Auxiliaries have been successful in promoting the project. This spring's reports will reflect those which adopted team membership last year. We look for a good increase in members.

This is the season when the majority of state Auxiliaries have annual meetings. Eleven of your national officers will be on the road, visiting and carrying the word of progress. We consider this a great privilege. Thank you for making it possible for me to attend your annual meeting—and GOOD TOMORROWS!

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. J. F. Veverka, Prairie City 50228

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Personals

Dr. Robert H. Westfall, a native of Nebraska City, Nebraska, has joined **Drs. George H. Pester** and **Donald T. Stroy** in the practice of surgery at the Council Bluffs Clinic. He is a 1955 graduate of the University of Nebraska Medical School, he interned and began a surgical residency in Detroit, and he engaged in general practice for about four years in Albion, Nebraska, before completing his residency in Omaha. He served for two years in the Navy's submarine service shortly after graduating from high school.

Dr. Thomas M. Gary recently moved from San Francisco to join **Dr. James B. Blair** in the practice of medicine in Cherokee. His boyhood home was in Denison, and he took his M.D. degree at the University of Iowa in 1961. He served an internship in the U. S. Public Health Service and remained with that organization for four years, being stationed successively in Detroit and San Francisco. The Garys have three children of pre-school ages.

On July 5, **Dr. James R. Hill,** a 1965 graduate of the U. of I. College of Medicine, joined Medical Associates, in Boone. He recently completed an internship at Iowa Lutheran Hospital, Des Moines. The other members of the group are **Drs. R. A. Manderscheid, L. R. Greco, G. H. Sutton, Jr.,** and **J. M. Wall.**

Dr. L. J. O'Brien, of Fort Dodge, is the IMS representative on the task force that has been appointed by the State Board of Social Welfare to plan the implementation of Title XIX of the Social Security Act.

Dr. T. J. Irish, Jr. closed his practice in Forest City, recently, before beginning a residency in general surgery at Denver General Hospital, Denver. He joined his father in general practice at Forest City in 1963.

Dr. H. W. Berthelsen has moved his practice from Hawarden to Rock Valley, where he will be associated, again, with **Dr. L. K. Yates.**

Dr. Jack L. Barga, the Waterloo city health officer, his wife and three of their children were injured in an automobile accident near Norton, Kansas, on June 20. Dr. Barga was attempting to pass an oil truck, when the truckdriver turned left without signalling. The doctor suffered a broken knee cap; his wife broke two bones in her left

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leg; and one of their sons, Mark, sustained a broken nose and a concussion. The car was demolished.

Dr. Otto C. Della Maddalena, of Waterloo, has been named psychiatric consultant at the Cedar Valley Mental Health Center, in Waverly. Dr. Della Maddalena recently joined **Drs. W. A. Tice, Thomas Board** and **Philip Hastings,** after serving on the staff of the Mental Health Institute at Mt. Pleasant.

Dr. and Mrs. F. N. Cole were guests at a dinner on June 18, at the Highland Country Club, Iowa Falls, to celebrate their fortieth wedding anniversary. Dr. Cole has practiced in the community since 1932.

Dr. George A. Jardine, of New Virginia, has passed the fiftieth anniversary of his initiation into the Masonic Lodge. It is said that only 12 out of 1,000 members attain that record.

At a dinner meeting of the Winneshiek County Medical Society, on June 14, **Dr. J. G. Goggin,** of Ossian, was recognized for 50 years' service to medicine. On behalf of the IMS, **Dr. E. F. Hagen,** of Decorah, presented him a Fifty Year Club membership. **Dr. Robert Dolan,** of Decorah, returned Dr. Goggin a putter which had been missing for a week and which the Society had had gold-plated.

Robert H. Osborn, son of **Dr. Robert Osborn,** of Dexter, graduated with honors from the U. of I. College of Medicine on June 10. He is to intern at Emanual Hospital, Portland, Oregon.

The new Pottawattamie County medical examiner is **Dr. J. V. G. Angel,** of Carson, an allergist. **Dr. F. E. Marsh** had been acting examiner since the resignation of **Dr. Rudolph Selo,** a few weeks ago, in consequence of a dispute about the fees to which a medical examiner is entitled. Dr. Angel plans to open a Council Bluffs office, and to divide his time between Carson and Council Bluffs.

The Iowa and Sioux City Health Departments and the Woodbury County Medical Society presented an emergency care seminar at the municipal auditorium in Sioux City on June 28. The speakers were **Jay P. Sanford, M.D.,** of the U. of Texas Southwestern Medical School, Dallas; various representatives of the U.S.P.H.S. and of the Office of Civil Defense; and **Mr. Paul Sodt,** administrator of Klein Memorial Hospital, Burlington.

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Supplied: ½ oz. tube.

References: 1. Spencer, Malcolm C. and Becker, S. W., Jr.: **A Hydroquinone Effect,** Clinical Medicine 70:6 (June) 1963. 2. Spencer, Malcolm C: **Hydroquinone Bleaching,** AMA Archives of Dermatology 84:131 (July) 1961.

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According to an item in the DES MOINES REGISTER for July 1, **Dr. Donna Drees** and **Dr. Robert Foley,** who finished internships on about that date at Iowa Lutheran Hospital, Des Moines, planned to enter private practice in the capital city, and another of that group, **Dr. Wendell M. Petty,** planned to locate in Alden.

An exhibit from the U. of Iowa's Department of Ophthalmology won second place in competition with scientific displays from throughout the nation at the AMA annual meeting in Chicago, late in June. The exhibit "Stereoscopic Fluorescence Photography of the Ocular Fundus in Local and Systemic Disease" won the silver medal Hektoen Award for Original Research. Exhibits from the same department won the top award in 1960, and a certificate of merit in 1963.

Research for this year's display was done by **Dr. Joseph T. Leinfelder,** a resident, and **Dr. William B. Snyder,** a professor of ophthalmology, **Dr. Walter M. Kirkendall,** a professor of internal medicine, **Mr. Edwin Lee Allen,** an associate in ophthalmology, and **Mr. Ogden Frazier,** an ophthalmology technician.

Many of the latest technics for taking stero photos of the fundus have been developed in Iowa City. Two photos of the fundus, taken at slightly different angles, enable the physician, when he examines them through a stereoscopic viewer, to recognize and evaluate masses and tumors. The technic is considered particularly useful in the study of hypertensive conditions and diabetes patients, since it allows the physician to see the location of a hemorrhage or, sometimes, what is plugging a blood vessel.

Mr. Charles L. Lyford, of Manly, a senior in medicine at the U. of Iowa, has been named president of the Medical Student Research Club. The other officers are **Mr. David W. Hudgel,** of Casper, Wyoming, vice president; and **Mr. John C. Barker,** of Davenport, secretary-treasurer. **Dr. Francois Abboud,** an associate professor of internal medicine, is the faculty advisor.

Among the objectives of the club is to provide a forum for discussions of student research work. The organization is an affiliate of the American Federation for Clinical Research, whch has a membership of some 5,200 of the nation's younger scientists.

The following are recent physician participants and their topics on the radio program "Doctor's House Call," broadcast over WOI, Ames: **Dr. Gail Proffit,** Ames, "Sex Education," June 29; **Dr. C. J. Smith,** Gilmore City, "Summer Health Problems," July 6; **Dr. William C. Wildberger,** Perry and Woodward, "Retarded Children," July 13; **Dr. William Bennett,** Marion, "Narcotics," July 20; and **Dr. Madelene M. Donnelly,** Des Moines, "PKU Testing," July 27.

Dr. Charles B. Preacher, of Davenport, recently succeeded to the presidency of the Iowa Association of Pathologists. **Dr. F. Donald Winter,** of Burlington, is the newly-chosen president-elect; **Dr. C. H. Denser,** of Des Moines, is secretary-treasurer; **Drs. Gilbert Clark,** of Waterloo, and **George Zimmerman,** of Iowa City, are executive council members; **Dr. K. R. Cross,** of Iowa City, is College of American Pathologists assemblyman; and **Dr. Fred Dick, Jr.,** of Waterloo is American Society of Clinical Pathologists councilor.

At a meeting of the Canadian Medical Association, in Edmonton, Alberta, on June 17, **Dr. William B. Bean,** head of internal medicine at the U. of I. College of Medicine, delivered the twelfth triennial Osler Oration, on "William Osler, the Man, the Legend and the Influence." Three physicians from the United States had delivered previous lectures in the series. Dr. Bean has edited a book entitled SIR WILLIAM OSLER APHORISMS, FROM HIS BEDSIDE TEACHING AND WRITING, from a collection made by his father, **Dr. Robert B. Bean,** who was a colleague of Sir William's at Johns Hopkins University.

Dr. W. B. Bean also gave a lecture on June 15 on "Bleeding From the Alimentary Canal in Rare Diseases With Diagnostic Skin Lesions," at a meeting of the Canadian Gastrointestinal Association.

Dr. William C. Keettel, professor and head of obstetrics and gynecology at the U. of I. College of Medicine, spent two weeks in May teaching, lecturing and consulting in Lebanon, Jerusalem and Greece. Topics for his two lectures at the Middle East Medical Assembly, in Bierut, were "Changing Concepts in the Management of Trophoblastic Disease" and "Amenorrhea, With Particular Emphasis on Diagnosis of Temporary and Permanent Ovarian Failure." He spoke on "Management of Endometrial Carcinoma" and "Elective Induction of Labor" at a postgraduate conference at American University, and participated in discussion sessions on abortion and management of the pregnant diabetic. "Primary Ovarian Carcinoma" was the topic for a formal lecture he presented for students and faculty of the University.

Mr. Harold W. Shipton, a research associate professor of medical electronics at the U. of I. College of Medicine, spoke on "Computers in the Control of Laboratory Instruments" at a biomedical-engineering symposium at Marquette University, Mil-

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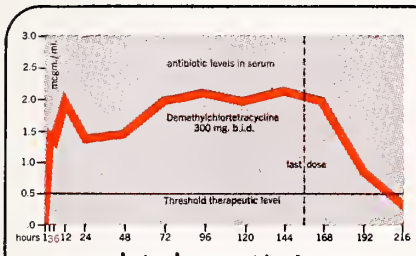

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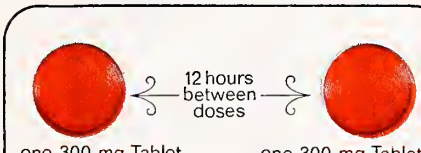

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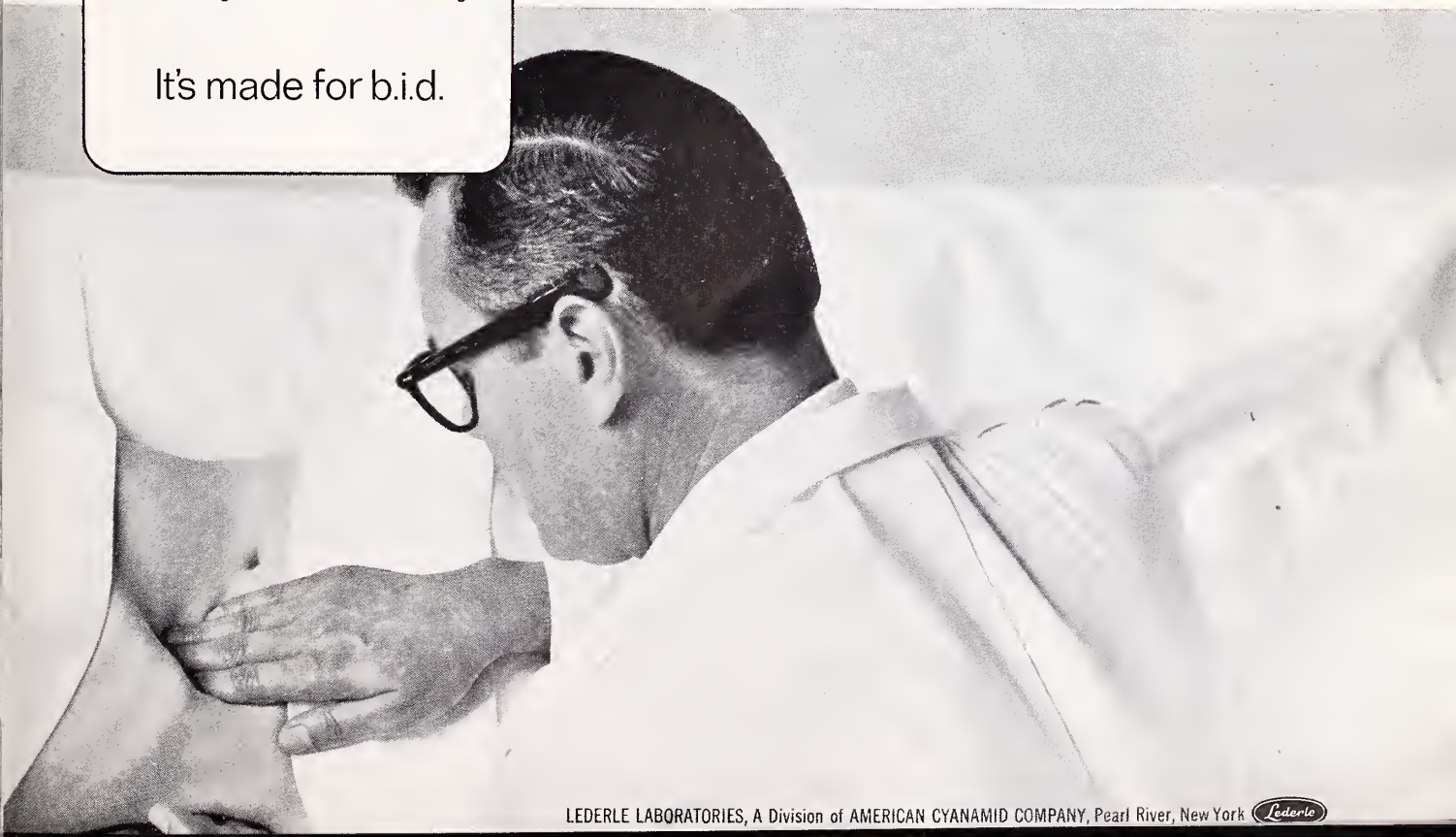

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waukee, on June 24, and he spoke on "Prospects for On-line Computers in Pre-clinical Laboratories" at a meeting of the Drug Information Association, in Chicago on June 26.

Dr. Robert E. Carter, assistant dean of the U. of I. College of Medicine and a professor of pediatrics, spoke on general-practice training to staff members of St. Mary's Hospital, in Minneapolis, on June 15.

Dr. Adolph L. Sahs, professor and head of neurology at the U. of I. College of Medicine, became president-elect of the American Neurological Association in June. He was president of the American Academy of Neurology from 1961 to 1963.

Dr. Samuel J. Fomon, a professor of pediatrics at the U. of I. College of Medicine, has been selected to receive the 1966 Borden Award of the American Academy of Pediatrics. The award consists of $1,000 and a gold medal, and it will be presented to him at the Academy's annual meeting in Chicago, October 22-27. He is being recognized for his studies of nutrition in normal growth and development. He received his undergraduate training at Harvard, took his M.D. degree at the University of Pennsylvania, interned at Queens General Hospital, New York City, served his residency at Children's Hospital, Philadelphia, was a research fellow at Children's Hospital, Cincinnati, and completed two years of Army service before joining the U. of I. staff as an assistant professor of pediatrics in 1957.

The University of Nebraska College of Medicine has hired **Dr. F. Miles Skultety** to fill its newly-created Shackelford Professorship of Neurosurgery and Neuroanatomy. Dr. Skultety, currently a professor at the U. of I. College of Medicine, received his B.A. and M.D. degrees at the University of Rochester, and a Ph.D. in anatomy in Iowa City. He was a fellow in neurosurgery at the Lahey Clinic, Boston, before coming to Iowa in 1951. He will take up his new duties on September 1.

Mrs. Opal Fore, who has been executive director of the Iowa Mental Health Authority for the past 18 years, retired in July and entered private social-work practice in Des Moines. **Dr. Paul E. Huston,** director of the Iowa Mental Health Authority, said "Mrs. Fore is more responsible than any other person for the development of community mental health programs in Iowa."

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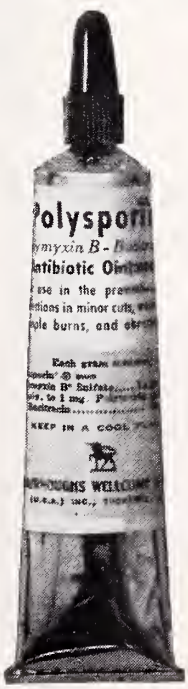

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Dr. T. C. White, who moved from Chariton to Fairfield in April, has announced his intention of returning to practice in Chariton within a short time. Currently, he is recuperating from an appendectomy.

Dr. John Sear, of Alden, resigned the post of Hardin County medical examiner on June 30, and announced his intention to join the Menninger Foundation, a psychiatric clinic in Topeka, Kansas.

Dr. Arthur E. Barnes, of Cedar Rapids, escaped injury in an automobile collision there, on June 14.

Dr. N. A. Massih is a new member of the staff at the Council Bluffs Clinic. He has been on the staff of the Creighton University Medical School as an assistant professor of internal medicine. Born in Iran, he received his medical training at the University of Geneva, in Switzerland. He and Mrs. Massih have four children.

Dr. Richard Caplan, an associate professor of dermatology at the U. of I. College of Medicine, joined the staff of the hospital ship *Hope*, in mid-July, for a two-month tour of duty. It is currently at a port in Nicaragua.

Thomas J. Brobyn, son of the late **Dr. Thomas E. Brobyn,** of Grinnell, received his M.D. degree from Temple University School of Medicine, Philadelphia, on June 16.

On July 15, the State Board of Regents made **Drs. Robert E. Carter** and **John C. MacQueen** associate deans of the U. of I. College of Medicine. Both are professors of pediatrics. Dr. Carter will assume additional responsibilities in the areas of academic and research programs, and Dr. MacQueen will be in charge of development of Oakdale as part of the Medical Center. **Mr. Woodrow W. Morris,** also an associate dean, will continue as director of student-affairs programs. **President Howard Bowen** said that the new appointments will give **Dean Robert C. Hardin** more time for long-range planning.

Dr. Walter R. Block, director of the Child Evaluation Clinic at Cedar Rapids, and consultant to the local Center for Retarded Children there, addressed the Linn County Association for Mental Retardation, July 11, on "Recent Advances in the Field of Mental Retardation."

Dr. L. Lloyd Long, of Perry, has agreed to maintain office hours each morning in Rippey. **Dr. W. E.**

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Chase left there on July 18 to take a student-health post at the State College of Iowa, in Cedar Falls.

Dr. Paul A. Fee, who plans to begin a private medical practice in Sioux City, received an Air Force Commendation Medal at the Sioux City Air Base, before leaving military service, for his outstanding contributions while stationed at the base. He is a 1963 graduate of the Creighton University Medical School.

THE IOWAN, the student newspaper at the University of Iowa, quoted **Dean Robert C. Hardin,** on July 8, as saying that 29 of the 120 students who entered the U. of I. College of Medicine last fall were honor students, and that the entire class was a select group, for there had been more than eight times as many applicants for admission as there were available places. Students who fail the first year's work in medicine are permitted to retake the year. Perhaps five per cent fail, but after retakes, the drop-out rate drops to three per cent for each class.

Dean Hardin was further quoted as saying that the College's full-time faculty of 280 supplied seven department heads to other medical colleges this year—an honor about which he has mixed feelings.

After a freshman and a sophomore year of traditional lectures and laboratory courses, students leave classes behind, except for an hour a day during which attendance is not taken. In place of classes, students serve "clerkships" in surgery, obstetrics, pediatrics and otolaryngology. Five students work under a junior resident, a senior resident and two staff members in each ward. They are checked at each step in examination and treatment, and in the process, the dean said, "They learn how to learn," and in his opinion, they learn faster. They are given a written examination at the end of each nine-week period.

The article concluded with the statement, "Since the junior and senior years under this plan duplicate the rotating internship, Hardin questioned whether graduates should go through an internship before beginning a residency, which may last from one to five years."

At a meeting of representatives from custodial homes, nursing homes and the Hamilton County public hospital, on June 27 at Webster City, **Dr. E. K. Lowary** spoke on "Evaluation and Physician Responsibility in the Management of Patients in Need of Medical Care and Rehabilitation."

Some 750 Des Moines area residents have been notified that a special follow-up study in the Des

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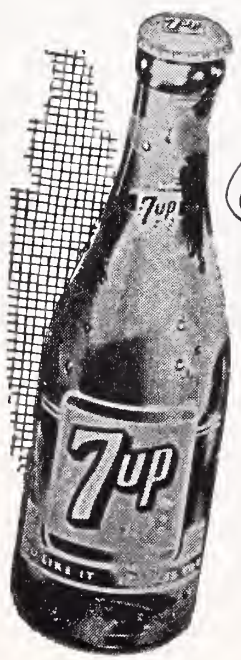

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Moines Population Study of Glaucoma is beginning. The 750 are among several thousand who previously have participated. The purpose of the study is to determine valid technics for diagnosing glaucoma, as well as to find the incidence of the disease. The follow-up is in addition to the yearly session for all participants. **Dr. Mansour F. Armaly,** of the U. of I. Department of Ophthalmology, is the director.

Dr. Darell Fisher, a 1961 graduate of the U. of I. College of Medicine, who has been a preceptor in surgery with Surgical Associates, in Mason City, during the past year, began a four-year residency in orthopedic surgery at the Mayo Clinic on July 1. He interned at Iowa Methodist Hospital, Des Moines, and was in Navy service at Honolulu from 1962 to 1965.

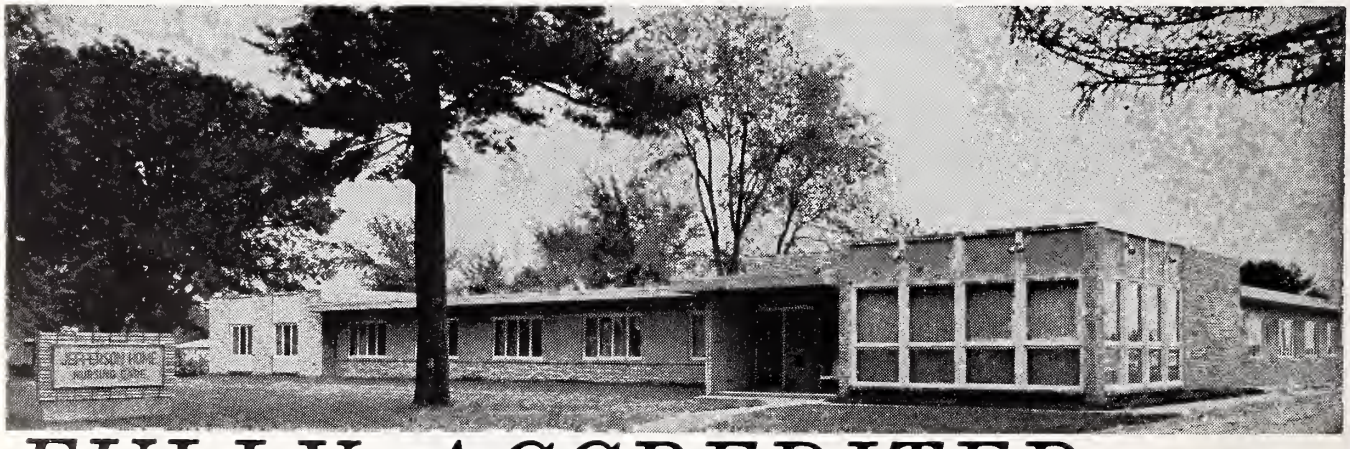
Dr. F. C. Bendixen, of Le Mars, discontinued his medical practice as of July 1. He closed his downtown office a year ago, and since then has practiced only limitedly.

Dr. Robert J. Lynn, formerly of Edgemont, South Dakota, has joined the staff of the Hampton Clinic as a general practitioner and surgeon. He is a 1947 graduate of the University of Nebraska College of Medicine. The other staff members there are **Drs. Seth G. Walton, W. L. Randall, D. K. Benge** and **R. E. Munns.**

Dr. Norman Nelson, a 1964 graduate of the U. of I. College of Medicine, has joined **Drs. Elmo Gamet** and **Gary Swanson** in practice at Lamoni. Dr. Nelson was a member of the Graceland College faculty, in Lamoni, from 1952 to 1960, teaching chemistry and agriculture.

Dr. E. D. McClean received a letter of commendation on July 12 for his 46 years of service to Mercy Hospital, Des Moines. **Dr. Marion E. Alberts,** the current chief of staff, made the presentation. At the time, Dr. McClean was a patient there, recuperating from a light stroke. He has been chief of staff at Mercy three different times.

Dr. Harold F. Entz was admitted to Allen Memorial Hospital, Waterloo, on July 12 after being injured in a chain-reaction automobile accident. He had been the driver of the rear car in a three-vehicle line, stopped at a traffic light. A fourth



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car hit his hard enough to cause damages to all four.

Dr. Franklin H. Top, head of preventive medicine at the U. of I. College of Medicine, was re-elected president of the State Board of Health, in mid-July.

Dr. Charles R. Scholl, of Cedar Rapids, spoke on venereal diseases at the last of a series of social-concern meetings, July 3, at the Presbyterian Church in Marion. The series was sponsored by several denominations there.

Roger Miller, son of **Dr. and Mrs. D. F. Miller,** of Williamsburg, was one of the graduates of the U. of I. College of Medicine at the commencement exercises held in June. The young Dr. Miller will intern at University Hospitals, Iowa City, and plans to make a career of research in internal medicine.

Deaths

Dr. E. J. Cole, 101, of Woodbine, died on July 6 at a hospital in Council Bluffs. He practiced medicine at Woodvine for 55 years, retiring in 1944, and served three terms as state representative from Harrison County, from 1922 to 1928.

Dr. P. M. Hoffman, 89, a Tipton physician for 52 years, died at the Crestview Nursing Home, in West Branch, on June 28. He was a Life Member of the Iowa Medical Society.

Dr. F. K. Burnett, 75, who practiced at Clarinda from 1926 to 1946, died on June 27 after a long illness. He last practiced at the VA Hospital in Cheyenne, Wyoming.

Dr. Thomas E. Brobyn, 58, of Grinnell, died of a heart attack at a hospital there, on June 19.

Dr. Philip A. Scott, 69, of Spirit Lake, died on June 14 at the Dickinson County Memorial Hospital following a long illness. He had retired from active practice in January, 1962. Burial was at Emmetsburg.

Dr. Olan R. Hyndman, 67, of Iowa City, died on June 23 at his home, following a heart attack. He was a 1962 graduate of the Johns Hopkins Medical School, and was chief of neurosurgery at the VA Hospital in Iowa City.

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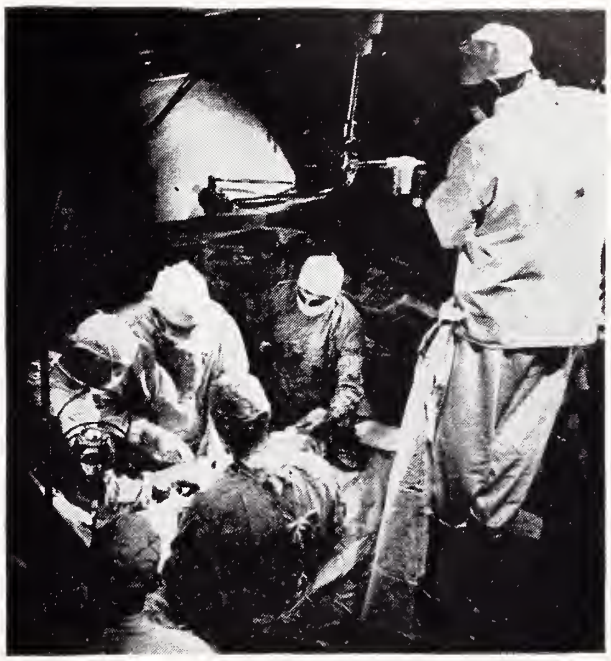

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Beer-Drinkers' Heart Disease

That mysterious "beer drinkers' heart disease" first reported in Quebec, may have occurred in two cities in this country. A copyrighted story in the Medical News section of the July 25 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION reports that at least 40 persons in Omaha, Nebraska, and perhaps three others in Minneapolis, Minnesota, have had myocardial disease similar to that reported in Quebec. Sixteen persons in Omaha and one in Minneapolis died.

Earlier (June 13), JAMA had reported concerning 48 victims in Quebec, of whom 20 died. However, there is still disagreement among medical authorities as to whether "beer drinkers' heart disease" really is a separate disease—or simply some of the symptoms of alcoholism. The victims in all three cities shared two characteristics: they were habitually heavy beer drinkers, and all had symptoms of myocardial insufficiency. In Quebec, three to seven quarts of beer daily wasn't an unusual consumption among the patients.

As a precautionary measure, U. S. and Canadian brewers have stopped putting trace amounts of cobalt into beer, and the U. S. Food and Drug Administration has recommended revocation of the 1963 regulation permitting cobalt in fermented malt beverages in this country. Cobalt gives beer a more stable "head," and prevents the gushing of foam over the edge of a glass. Investigators emphasize that it isn't known whether the foam-stabilizing cobalt had anything to do with the disease. It is merely one of several factors under investigation. In an order dated June 23, 1966, the F.D.A. said that it recommended revoking the regulation allowing cobalt in beer "since data are not available to answer the questions raised."

Another substance under study is papain, an enzyme from the papaya plant that is added to beer to reduce its stickiness.

A medical symposium at Quebec in May summarized what was then known about the outbreak in that city. Trouble started last August when a 39-year-old man was admitted to a Quebec hospital, suffering what appeared to be cardiac insufficiency. In following months, 47 others were similarly affected, including the 20 who died. Most of these patients were residents of the same section of Quebec, an area called the "lower city," and all were accustomed to drinking unusually large quantities of beer.

In Omaha, James F. Sullivan, M.D., and physician-colleagues at the Veterans Administration Hospital began to see patients with symptoms of the disease in late 1964. New cases reached a peak in summer, 1965, dropped off during the fall and winter, and then began to rise again during the spring. The disease, however, may have subsided as abruptly in Omaha as it appears to have done in Quebec. Dr. Sullivan, who is chief of medicine at the V.A. hospital and a professor of medicine at Creighton University School of Medicine, said he has not had a confirmed new case since early June. Nutritional deficiencies associated with excessive alcohol consumption may have been a factor in the disease, Dr. Sullivan and his co-workers reported last spring.

That report was based on the first 26 patients seen in Omaha, and before the Omaha and Quebec outbreaks were linked. Nutritional deficiency may still be a primary factor, Dr. Sullivan said. The survivors show evidence of nutritional liver disease, and thiamine deficiency has been demonstrated in both the Quebec and Omaha patients.

In Minneapolis, Yves Morin, M.D., one of the original investigators in Quebec, found three patients with symptoms suggestive of the disease among a large group with alcoholic heart disease. The patients were shown to Dr. Morin by Carl S. Alexander, M.D., a cardiologist at the Minneapolis Veterans' Administration Hospital. Dr. Alexander told JAMA he is not convinced that these patients present a disease distinct from previously described alcoholic heart disease. His opinion is shared by several pathologists who have examined material from the Quebec investigation.

While acknowledging that a final answer is not yet possible, the Quebec and Omaha investigators maintain that the combination of clinical, laboratory, and pathologic features seen in the patients appear to be unique. If it is assumed this is a unique disease, the JAMA article said, then its cause remains obscure.

A history of heavy beer consumption appears to be the one common factor among patients. In both Quebec and Omaha, the typical patient was a man in his early 40s who had been drinking from 100 to 200 ounces of beer daily for at least five years. "It is important to note, however, that the typical patient is not the skid-row type of alcoholic," Dr. Sullivan said. "Despite their excessive beer consumption, most of these patients were steadily employed and showed none of the characteristics usually associated with the alcoholic."

Prenatal Care

A study by the Health Information Foundation, of the University of Chicago, shows that the share of women who sought early prenatal care increased markedly between 1953 and 1958, but almost leveled-off in the succeeding five-year period, 1958-1963. Each of the three studies showed that women in the top brackets as regards income and educational levels were most likely to seek prenatal care promptly.

First visit to doctor	1952 %	1958 %	1963 %
In first month	38	51	52
End of third month	65	77	78
End of fourth month	79	84	88
End of sixth month	92	96	96
End of ninth month	97	99	98

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IMMEDIATE NEED for an all around family physician in highly desirable northwest Iowa community. Group of five doctors with growing practice. Salary to start, with early fully participating partnership. Address No. 1378, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines 50265.

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STUDENT HEALTH SERVICE. Excellent opportunity for generalist to join full-time staff of expanding health service. Pleasant university town in Rocky Mountain area. Address No. 1380, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines 50265.

WANTED: Full time industrial physician to work with medical director in an Iowa industry that is a private contractor for the Army and the Atomic Energy Commission. Training and internal medicine or past experience in general practice desired. Experience in public or industrial health is favored but not required. Regular work hours. May reside in plant area, with opportunity for some additional private practice. Must have Iowa license. Approximately 2,900 employees with complete health program, including radiologic health. Favorable hospital and county society relationships. Salary negotiable. Personal interview desired. Address No. 1386, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

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- Mercy Hospital Medical Day—Questions and Answers
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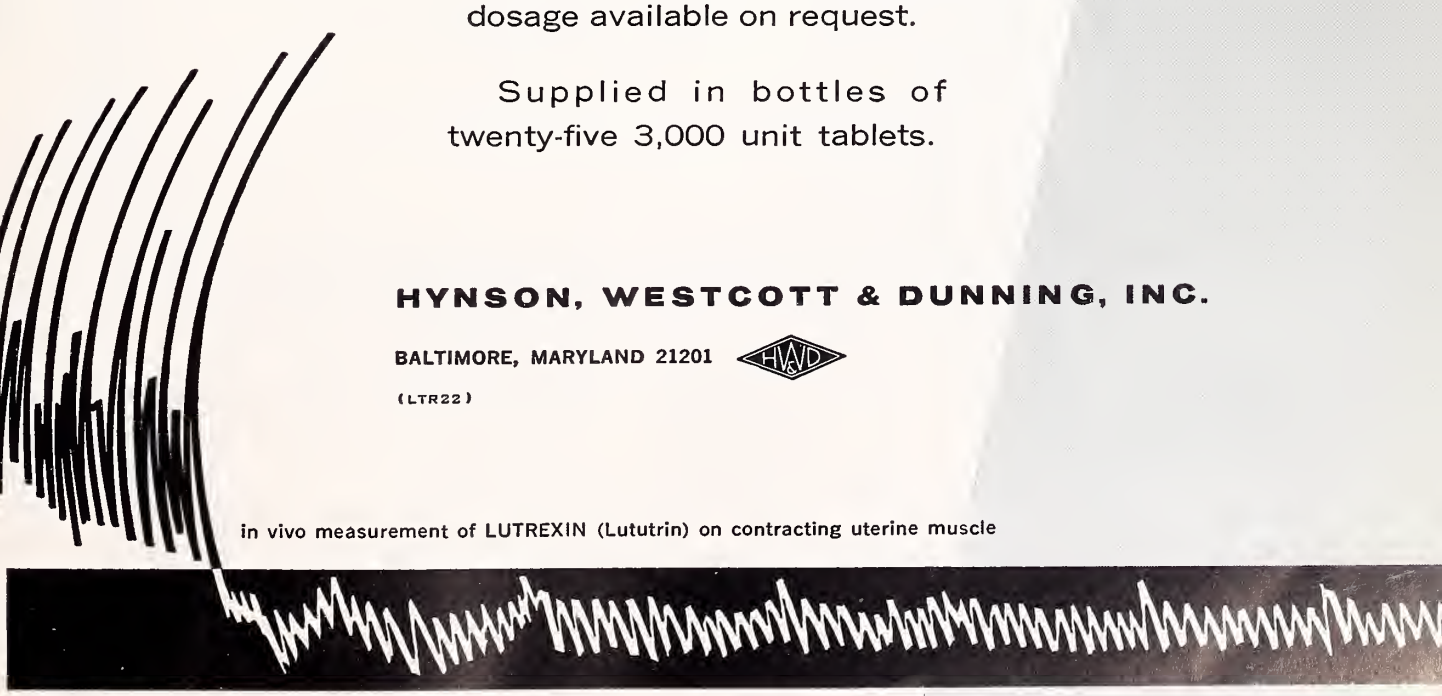

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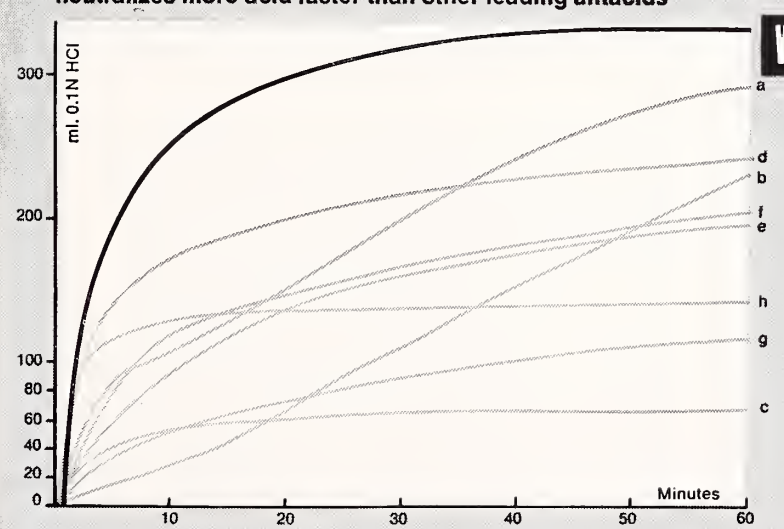

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The Month in Washington

Washington, D. C.—The Public Health Service Advisory Committee on Immunization has concluded that routine typhoid fever vaccination is not needed any longer in the United States.

Surgeon General William H. Stewart accepted the findings of the committee and stated as PHS policy that immunization against the disease is not recommended on a routine basis.

The committee reported that the incidence of typhoid in this country had declined steadily for many years and now is less than 500 cases a year. A continuance of the downward trend was predicted.

"Cases are sporadic and are primarily related to contact with carriers rather than to common source exposure," the committee said. "Recognizing this epidemiologic pattern of typhoid fever, redefinition of the role and use of typhoid vaccine is indicated."

The committee further stated that, "although typhoid vaccine has been suggested for individuals attending summer camps and those in areas where flooding has occurred, there are no data to support the continuation of these practices."

However, select immunization was recommended in the following situations:

—Intimate exposure to a known typhoid carrier as would occur with continued household contact.

—Community or institutional outbreaks of typhoid fever.

—Foreign travel to areas where typhoid fever is endemic.

In a separate report, the advisory committee predicted relatively little influenza during the 1966-67 season, but recommended vaccination after September 1 for certain high-risk groups—such as the chronically ill and older persons.

The committee pointed out, however, that it is reasonable to expect that limited outbreaks of Type A_2 influenza will occur in parts of the United States not experiencing Type A disease in 1964-65 or 1965-66. Similarly, the possibility of some Type B influenza is recognized, particularly in the Southwest.

"Vaccination when called for should begin as soon as practicable after September 1 and ideally should be completed by mid-December," the committee said. "It is important that immunization be carried out before influenza occurs in the immediate area since there is a two-week interval before development of antibodies."

Because variations in influenza viruses during the 1965-66 season were not of major significance, the composition of the 1966-67 vaccine is unchanged from that prepared for 1965-66.

* * *

A Senate Government Operations Subcommittee said that more information is needed in the field but that scientific data now available do not indicate human health hazards of sufficient significance to warrant drastic curbs on the use of pesticides. However, the subcommittee reported that "the magnitude of the future risk is uncertain in many important areas."

"Knowledge regarding the risk of chemical pesticides . . . will have to be broadened and refined considerably in order to provide clear-cut answers to questions that will be forced by the increasing need for pest control in the future," said a subcommittee report based on a two-year study.

"While some of the more gloomy prophecies that had been raised could not be supported by hard scientific fact, it is also true that science could not and still cannot prove that some of these prophecies are untenable."

To combat the human health dangers, the report recommended that the Department of Health, Education and Welfare accelerate an environmental health program; increased research in human pharmacology; development of safer chemical pesticides which are safer for human beings; greater emphasis on development of non-chemical pest-control methods; training of agricultural workers in good hygiene practices in using pesticides; and general educational programs on health in the chemical age.

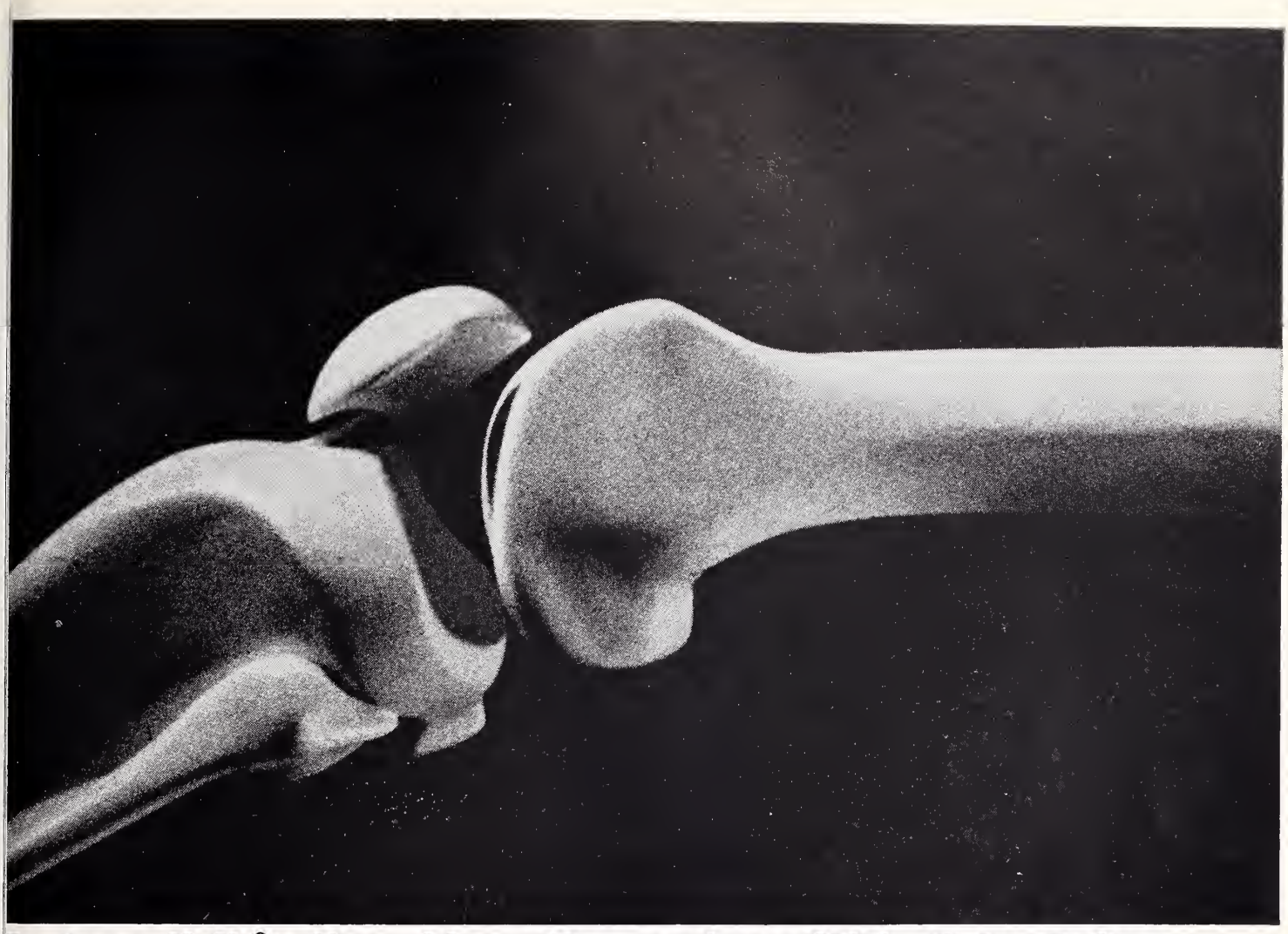
* * *

The Food and Nutrition Board of the National Academy of Sciences believes that it may be well for many Americans to reduce moderately the amount of fats they eat and substitute some polyunsaturated for saturated fats. However, the board concluded in a lengthy report, "Dietary Fat and Human Health," that present evidence on the connection between dietary fat and cardiovascular diseases is insufficient to warrant recommendations for radical dietary changes.

The board's study was directed to the problem of how much and what kind of fat is compatible with human health. The report emphasized that any changes in consumption of fat should be made on an individual basis with consideration given the consequent changes in caloric and nutrient intake.

"Until we learn more about which fats are desirable nutritionally, the Board recommends that the American consumer should partake of the foods that make up a varied, adequate, and not overly rich diet and maintain a normal body weight by judicious control of caloric intake and by daily exercise," the report said.

"A large amount of information has accumu-



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Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Use with caution in the first trimester of pregnancy.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

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lated relating dietary fats to the etiology of human atherosclerosis and its complications, particularly coronary artery disease. As yet, the causes and course of development of atheroma and its relation to coronary heart disease in man are imperfectly known. Disorders of fat transport or metabolism or both certainly participate, but are not the only factors. Heredity is involved in individual susceptibility. Disorders of blood flow and blood clotting are implicated in atheroma formation in addition to contributing to the fatal complications of the disease.

"Evidence to support the concept that increased plasma concentrations of cholesterol are atherogenic is considerable but not conclusive. . . . Many, but not all, population studies indicate that diets high in fat, among other nutrients, are correlated with higher concentrations of plasma cholesterol and with increased prevalence of cardiovascular disease. However, proof of a causal relationship is lacking. In the majority of the adult population the concentration of plasma cholesterol can usually be reduced by increase in the quantity of polyunsaturated fat in the diet at the expense of saturated fat. That this degree of reduction in plasma cholesterol is beneficial is still uncertain. . . .

". . . in spite of the large amount of information accumulated in recent years about atherosclerosis and its pathogenesis, many gaps in knowledge remain. Results of recent studies, while valuable and thought provoking, do not provide sufficient data for firm recommendations for radical dietary changes."

* * *

The Social Security Administration said that the 460,000 medicare patients in hospitals during the first month of the program's operation did not result in any overcrowding. There were a few isolated instances of overcrowding, mostly in rural areas, but they already existed before medicare started July 1, the SSA said.

The elderly patients occupied from 30 to 35 per cent of the beds in general hospitals, in comparison to about 25 per cent before medicare. Federal officials had estimated a 5 per cent increase.

Inquiries from intermediaries to SSA headquarters as to eligibility for Plan B medical benefits totalled 8,700 through July 22. A few spot checks showed assignments leading over direct billings by a small margin. But assignments normally would be filed sooner than direct billings.

There still were about 200 hospitals in the south that had not been qualified as to civil rights requirements on racial integration. This situation left 132 counties that have hospitals with none qualified at the end of the month. By states, the counties were: Mississippi 31, Georgia 23, Louisiana (parishes) 19, Texas 12, Virginia 11, South Carolina 9, Alabama 8, Arkansas 6, Kentucky 6, North Carolina 3, Tennessee 2, Florida 2, and West Virginia 1.

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Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.
Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity.
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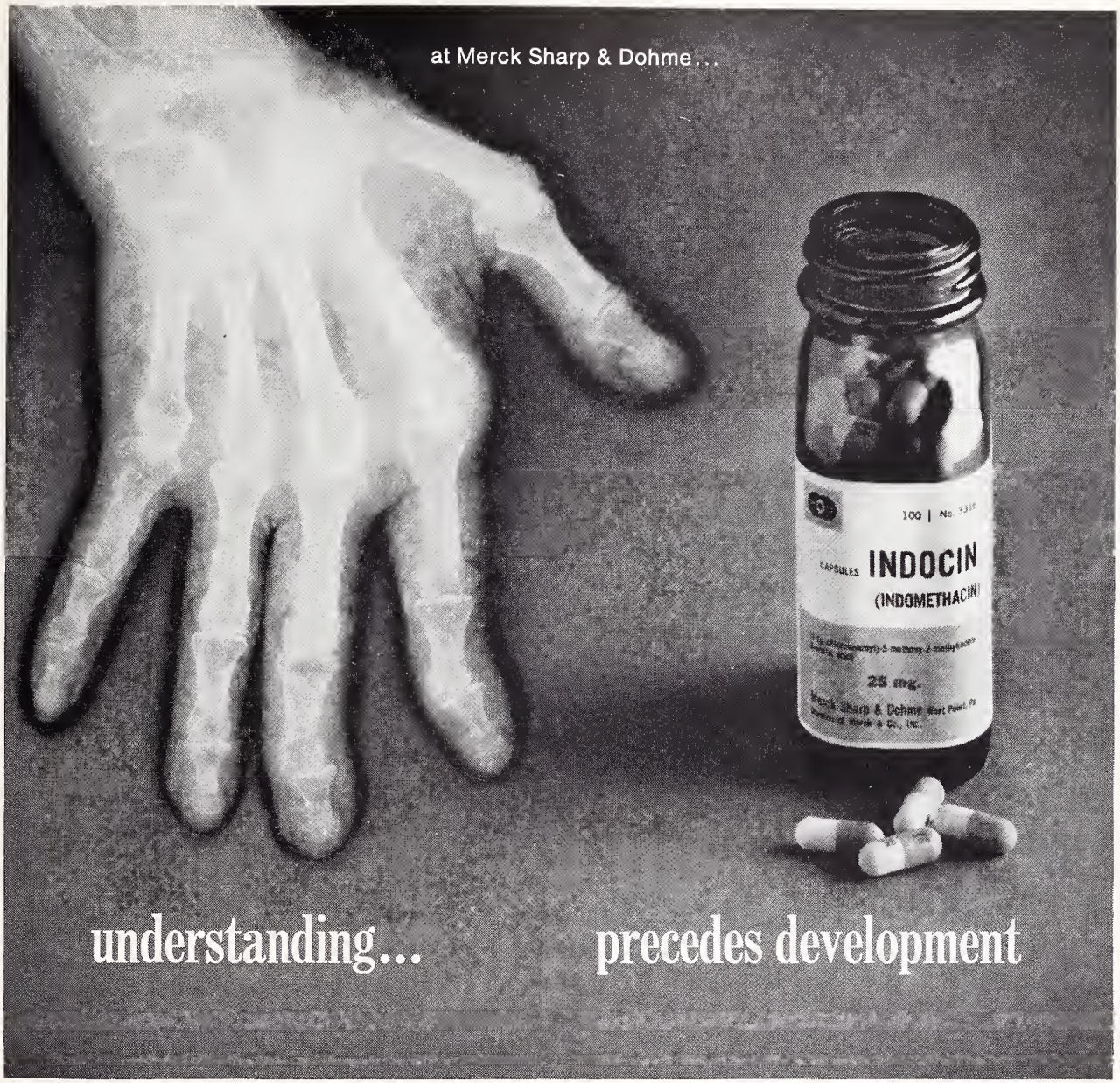

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Coming Meetings

IN STATE

Sept. 10 — **13th Annual Internal Medicine Symposium,** sponsored by the **Section of Internal Medicine of Iowa Methodist Hospital,** Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.

Sept. 18 — **IMS Fall Conference for County Medical Society Officers and Other Representatives,** Hotel Fort Des Moines, Des Moines.

Sept. 19-20 — **18th Scientific Meeting, Iowa Chapter American Academy of General Practice,** Hotel Savery, Des Moines.

Sept. 19-21 — **Prevention and Control of Hospital Infections,** Hotel Fort Des Moines, Des Moines.

Sept. 21-23 — **Postgraduate Conference, Three Days of Cardiology, University of Iowa College of Medicine,** Iowa City.

Sept. 30 — **Postgraduate Conference, Otolaryngology for the General Practitioner, University of Iowa College of Medicine,** Iowa City.

Oct. 2-5 — **8th Annual Medical Assistants In-Service Workshop,** University of Iowa, Iowa City.

Oct. 9 — **Dedication of New IMS Headquarters Building,** West Des Moines

Oct. 15 — **Mercy Hospital Medical Day,** Des Moines

Oct. 18-19 — **Postgraduate Course in Religion and Medicine,** University of Iowa, Iowa City.

Oct. 21-22 — **Postgraduate Course in Orthopedics,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Sept. 6-8 — **International Symposium on Selenium in Biomedicine, Oregon State University,** Corvallis.

Sept. 10 — **American College of Physicians, Tennessee-Kentucky Regional Meeting,** Nashville.

Sept. 10 — **American College of Physicians, North Dakota Regional Meeting,** Minot, North Dakota.

Sept. 10 — **American College of Physicians, Arkansas-Oklahoma Regional Meeting,** Lake Eufala, Checotah, Oklahoma.

Sept. 10-12 — **93rd Meeting of North Pacific Pediatric Society,** Alderbrook Manor, Union, Washington.

Sept. 11-15 — **Decennial Conference on "Cell, Tissue, and Organ Culture"** sponsored by the **Tissue Culture Association,** Bedford, Pa.

Sept. 11-16 — **12th Annual Meeting, Flying Physicians Association,** Dunes Hotel and Country Club, Las Vegas.

Sept. 14 — **Second Annual Symposium on Renal Disease, Upper Midwest Chapter of the National Kidney Foundation,** St. Paul Hilton Hotel, St. Paul.

Sept. 15-16 — **Interprofessional Seminar on Diseases Common to Animals and Man, Kansas State University College of Veterinary Medicine,** Manhattan.

Sept. 16-17 — **Neurological Problems in Office Practice, University of Missouri Medical Center,** Medical Center Auditorium, Columbia.

Sept. 18-21 — **Washington State Medical Association,** Davenport Hotel, Spokane.

Sept. 23-24 — **American College of Physicians, South Dakota Regional Meeting,** Guest House Motel, Watertown.

Sept. 24 — **American College of Physicians, Missouri Regional Meeting,** Kansas City General Hospital, Kansas City, Missouri.

Sept. 25-28 — **Colorado Medical Society,** Broadmoor Hotel, Colorado Springs.

Sept. 25-30 — **3rd International Congress of Nephrology,** Washington Hilton Hotel, Washington, D. C.

Sept. 25-30 — **Michigan State Medical Society,** Pantlind Hotel, Grand Rapids.

Sept. 26-28 — **26th Annual Congress on Occupational Health,** sponsored by the **AMA Council on Occupational Health,** Sheraton Hotel and Memorial Coliseum, Portland.

Sept. 26-30 — **17th Annual Meeting of the Animal Care Panel,** Edgewater Beach Hotel, Chicago.

Sept. 27-Oct. 1 — **Oregon Medical Association,** Portland.

Sept. 28-30 — **American Association of Medical Clinics,** del Coronada Hotel, San Diego.

Sept. 28-Oct. 1 — **Postgraduate Course, "Advances in Cutaneous Medicine for Internists," American College of Physicians,** Mann Hall, Medical Science Building, Mayo Graduate School of Medicine, Rochester.

Sept. 29-Oct. 1 — **ACOG District VI Meeting,** Sheraton-Fontenelle, Omaha.

Oct. 1-2 — **International Conference on Pathology of Renal Diseases,** New York Medical College, New York City.

Oct. 1-5 — **Annual Session, American Society of Anesthesiologists,** Sheraton Hotel, Philadelphia.

Oct. 1-7 — **Annual Otolaryngologic Assembly of 1966,** Department of Otolaryngology, College of Medicine of the University of Illinois, Illinois Eye and Ear Infirmary, Medical Center, Chicago.

Oct. 3-5 — **Hospital Medical Staff Conference,** University of Colorado School of Medicine, Estes Park, Colorado.

Oct. 3-5 — **44th Annual Fall Clinical Conference, Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Missouri.

Oct. 3-7 — **First IMR International Symposium, "Trace Characterization—Chemical and Physical," National Bureau of Standards,** Gaithersburg, Maryland.

Oct. 3-7 — **Postgraduate Course, Care of the Critically Ill Medical Patient, American College of Physicians,** State University of New York College of Medicine, Syracuse.

Oct. 5 — **Professional Medical Symposium, The Kidney Foundation of Illinois,** Sheraton-Chicago Hotel, Chicago.

Oct. 6-8 — **Seminar on the Need for Medical Information Specialists,** YMCA Conference Center, Estes Park, Colorado.

Oct. 7-8 — **American College of Physicians, Southeastern Regional Meeting,** Biloxi, Mississippi.

Oct. 7-8 — **3rd National Congress on Medical Quackery,** sponsored by the **American Medical Association** and **National Health Council,** Pick-Congress Hotel, Chicago.

Oct. 10-14 — **52nd Annual Clinical Congress, American College of Surgeons, Civic Auditorium,** San Francisco.

Oct. 10-14 — **Chemical and Biological Defense Training Course,** sponsored by the **U. S. Public Health Service,** Division of Health Mobilization, U. S. Army Chemical Center and School, Fort McClellan, Alabama.

Oct. 12 — **Symposium on Management of the Chronic Disease Patient, "Hypertension,"** sponsored by the **U. S. Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Oct. 14-15 — **Conference on Soft Tissue Trauma,** University of Missouri Medical Center, Medical Center Auditorium, Columbia.

Oct. 15 — **American College of Physicians, District of Columbia-Maryland Regional Meeting,** Washington, D. C.

Oct. 15 — **American College of Physicians, Montana-Wyoming Regional Meeting,** Great Falls, Montana.

Oct. 17-20 — **51st Annual Scientific Assembly of Interstate Postgraduate Medical Association,** Sheraton-Park Hotel, Washington, D. C.

Oct. 19-23 — **10th Annual Meeting, American Association of Medical Assistants,** Chase-Park Plaza Hotel, St. Louis.

Oct. 22-27 — **35th Annual Meeting, American Academy of Pediatrics,** Palmer House Hotel, Chicago.

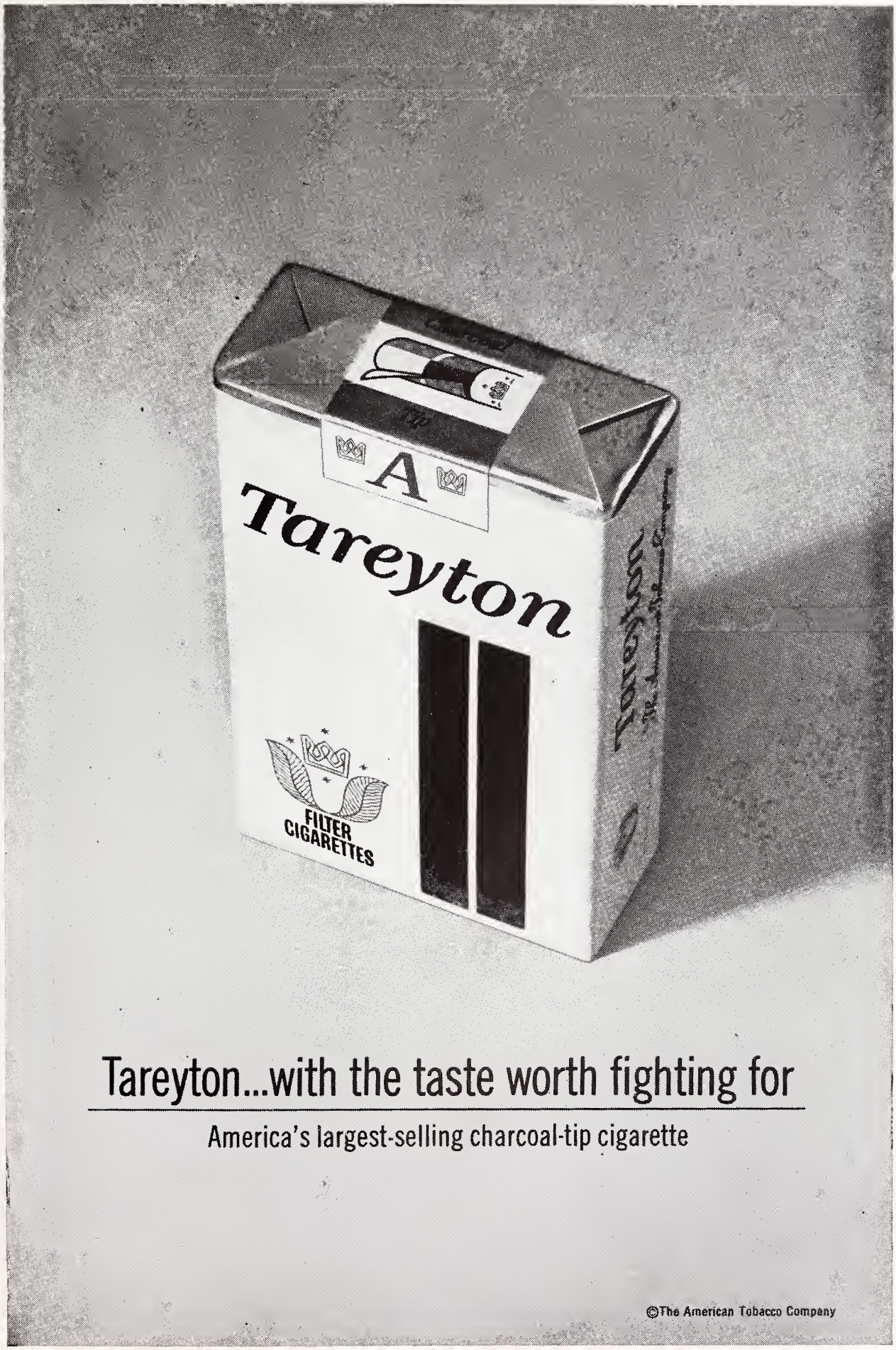
Oct. 26 — **Symposium on Management of the Chronic Disease Patient, "Cerebral Palsy,"** sponsored by the **U. S. Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Oct. 26-28 — **Theory and Application of Gas Chromatography in Industry and Medicine,** Hahnemann Medical College and Hospital, Marriott Motor Hotel, Philadelphia.

Oct. 27-29 — **Postgraduate Course, Population Dynamics, Genetic Counseling and Birth Control,** University of Colorado School of Medicine, Denver.

Oct. 27-29 — **Annual Postgraduate Course in Gastroenterology, American College of Gastroenterology,** Bellevue Stratford, Philadelphia.

Oct. 31-Nov. 12 — **Postgraduate Course in Laryngology and Bronchoesophagology,** sponsored by **Department of Otolaryngology** of the **Illinois Eye**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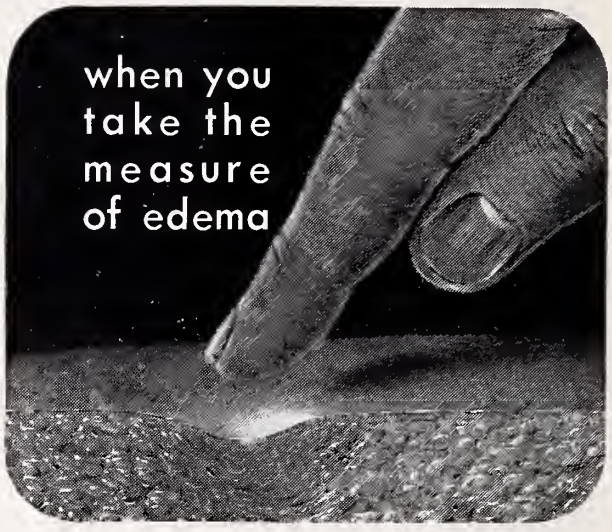
and Ear Infirmary and the College of Medicine, University of Illinois Medical Center, Chicago.

ABROAD

Sept. 4-9	**International Society of Orthopedic Surgery and Traumatology**, Paris.
Sept. 5-11	**4th World Congress of Psychiatry**, Madrid.
Sept. 6-10	**3rd Congress, Latin-American Association of Proctology**, Santiago.
Sept. 8-10	**International Symposium on Atherosclerosis and Reticulo-Endothelial System**, Como, Italy.
Sept. 11-14	**1st International Congress, American Society of Abdominal Surgeons**, Rome.
Sept. 15-18	**8th Congress, International College of Medical Practice**, Salzburg, Austria.
Sept. 15-18	**3rd International Congress of Psychosomatic Medicine**, Paris.
Sept. 18-24	**World Congress of Gastroenterology**, Tokyo Prince Hotel, Tokyo.
Sept. 20-24	**36th Annual Meeting, German Society of Gynecology**, Hanover.
Sept. 26-28	**4th Annual Scientific Assembly, College of General Practice of Canada**, Ontario Chapter, Toronto.
Sept. 29-Oct. 1	**7th Annual Meeting, Anglo-German Medical Society**, Bad Nauheim, Germany.
Oct. 1-4	**15th Congress International College of Surgeons**, Mexico City.
Oct. 3-6	**63rd French Congress of Otorhinolarynology**, Paris.
Oct. 3-7	**Symposium on Solid-State and Chemical Radiation Dosimetry in Medicine and Biology, International Atomic Energy Agency**, Vienna.
Oct. 3-8	**6th International Congress of Clinical Pathology**, Rome.
Oct. 6-8	**Annual Meeting, European Academy of Allergology**, Brussels.
Oct. 6-9	**14th French National Congress on Preventive and Social Medicine**, Strasbourg, France.
Oct. 7-9	**International Symposium on Coronary Circulation and Energetics of the Myocardium**, Institute of Experimental Cardiology, Milan.
Oct. 10-15	**8th Latin-American Congress of Anesthesiologists**, Caracas, Venezuela.
Oct. 11-13	**International Symposium on Physical Activity and Cardiovascular Health, Ontario Medical Association and Ontario Heart Foundation**, Toronto.
Oct. 13-19	**6th Congress International Academy of Pathology**, Kyoto, Japan.
Oct. 14-18	**Interamerican Association of Gastroenterology**, Madrid.
Oct. 17-19	**Annual Meeting German Society for Hematology**, Berlin.
Oct. 17-22	**20th Austrian Physicians Congress**, Vienna.
Oct. 23-29	**9th International Cancer Congress**, Tokyo.
Oct. 24-26	**16th Annual Scientific Meeting, Otolaryngological Society of Australia**, Sydney.
Oct. 24-28	**Australian College of General Practitioners**, Adelaide, South Australia.
Oct. 24-28	**15th Pan-American Congress on Tuberculosis and Respiratory Diseases**, Buenos Aires.
Oct. 25-29	**53rd Annual Meeting, German Orthopedic Society**, Hamburg.
Oct. 25-29	**2nd Latin-American Congress of Allergology**, Quito, Ecuador.
Oct. 28-29	**5th French National Congress on Sports Medicine**, Tours, France.
Oct. 29-Nov. 3	**Congress on Pediatrics, 8th Pan-American, 1st Latin-American, and 11th Mexican**, Mexico City.
Oct. 29-Nov. 4	**2nd Conjoint Meeting, Australian-New Zealand Ophthalmological Societies**, Rotorua, New Zealand.
Oct. 30-Nov. 5	**5th World Congress of Cardiology**, New Delhi.
Nov. 1-5	**American Fracture Association**, Caracas, Venezuela.
Nov. 13-16	**6th Latin-American Congress of Otorhinolaryngology**, Mexico City.
Nov. 13-19	**5th Latin-American Congress of Gynecology and Obstetrics**, Santiago, Chile.
Nov. 17-19	**6th Annual Far East Session, American College of Physicians**, Tokyo.
Nov. 24-26	**Annual Scientific Session, Canadian Cardiovascular Society**, Calgary, Alberta, Canada.
Nov. 28-Dec. 1	**International Meeting on Aerospace Medicine, Aviation Medical Society of Australia**, Sydney.



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AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur.

Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

Before prescribing or administering, read the package insert or file card available on request.

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An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

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(meprobamate)

Indications: Meprobamate is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, meprobamate fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: 'Miltown' (meprobamate) is available in two strengths: 400 mg. scored tablets and 200 mg. coated tablets. 'Meprotabs' (meprobamate) is available as 400 mg. white, coated, unmarked tablets. *Before prescribing, consult package circular.*

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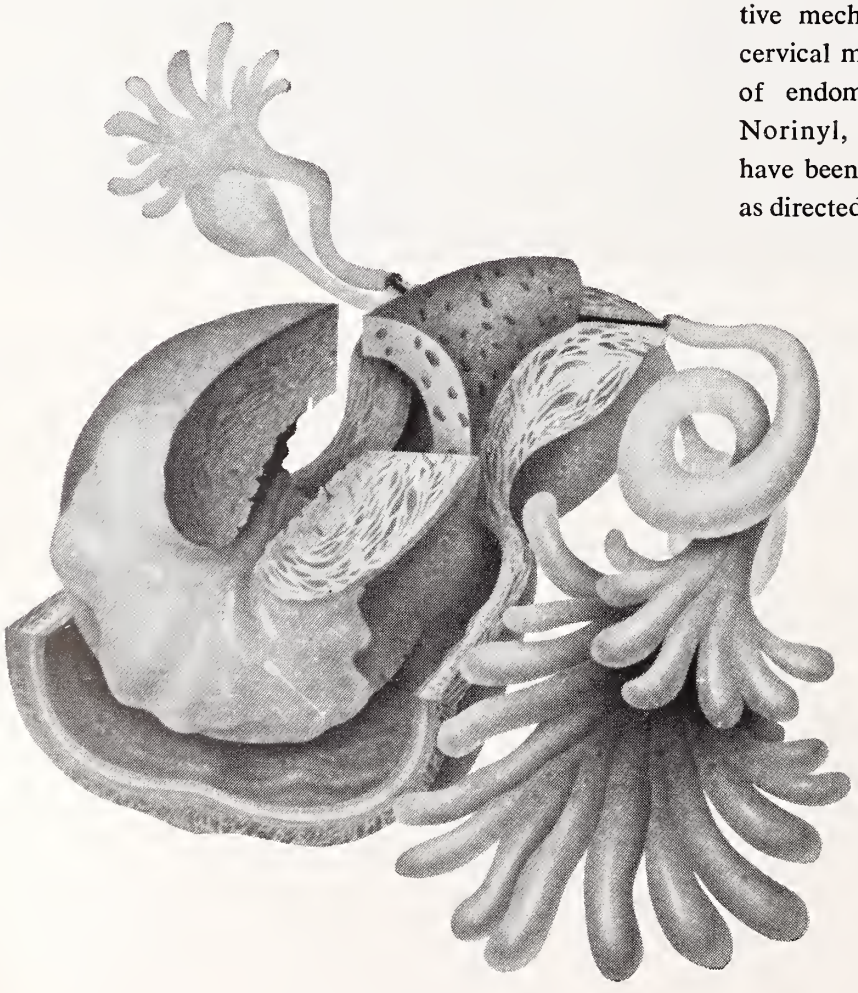
for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.

Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in paticnts with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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SQUIBB NOTES ON THERAPY

Breast-feeding and the "modern mother"

Despite a mild resurgence of interest in the importance of breast-feeding a few years ago, many women today do not choose to nurse their young. This is for a variety of reasons—social, economic, cultural and sometimes medical. In such cases the physician's task is to find the most suitable means of preventing lactation and easing the pain of breast engorgement.

The means of therapy

The value of hormone therapy for this indication is of course well established. Both androgen and estrogen are known to inhibit the production and secretion of the lactogenic hormone by the anterior pituitary. As estrogen levels decline sharply at parturition, lactogenesis is established. When androgen and estrogen are administered to the patient before the release of the lactogenic hormone lactation and breast engorgement are usually prevented.

The time of therapy

The time of administration of this combined medication is crucial; it must be given early enough to suppress the pituitary prolactin and last long enough to permit physiologic readjustment during the puerperium. Excellent results are most often seen when therapy is administered before the onset of the second stage of labor.

However, factors other than effectiveness must also be considered. The agent selected should not interfere in any way with parturition, subsequent uterine involution and the restoration of normal ovarian cyclic function. Furthermore, it should not cause rebound breast engorgement or other manifestations of hormonal imbalance.

A balanced formulation

Providing single-dose therapy for the prevention of lactation and breast engorgement, Deladumone OB is a potent androgen-estrogen combination with a prolonged action. The optimal balance of androgenic and estrogenic hormones achieved in this preparation minimizes the disadvantages inherent in single hormone therapy, such as rebound breast engorgement. Involution of the uterus and resumption of menstrual cycles are not affected.

As reported in a recent published study (Roser, D. M.: Obstet. & Gynec. *27*:73, 1966), Deladumone OB provided good suppression of breast engorgement in 95.3% and suppression of lactation in 81.1% of 86 obstetrical patients. These results are in general agreement with those of many earlier investigations; in several studies this injectable androgen-estrogen combination proved to be superior to oral medication.

Dosage:

As a single injection of 2 cc. before the onset of the second stage of labor.

Contraindications:

Established or suspected mammary cancer or genital malignancy.

Precautions and Side Effects:

Certain patients may be unusually responsive to either estrogenic or androgenic therapy. In such individuals virilization, uterine bleeding or mastodynia may occur.

Supply:

Deladumone OB, providing 180 mg. testosterone enanthate and 8 mg. estradiol valerate per cc., is available in 2 cc. Unimatic® disposable syringes and in 2 cc. vials. Both preparations are dissolved in sesame oil, with 2% benzyl alcohol as a preservative. *Before use, consult product literature for full prescribing information.*

Deladumone® OB

Squibb Testosterone Enanthate (180 mg./cc.) and Estradiol Valerate (8 mg./cc.)

Single-dose injection for lactation inhibition

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of active tuberculosis
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of U.S. population.

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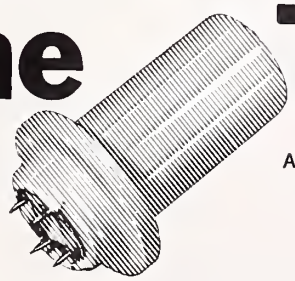

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prolonged sitting at desks, pianos,
writers and drafting boards. The str
set up by the heavy, forward-tilted
and trunk, balanced precariously
insufficient base, result in strain
dorsal musculature, particularly a
low lumbar level.

The unusual muscle-relaxant and
gesic properties of 'Soma' make it
cially useful in the treatment of low
sprains and strains. 'Soma' is w
prescribed ☐ **to relieve pain** ☐ **to**
muscles ☐ **to restore mobility.**

Indications: 'Soma' is useful for managem
muscle spasm, pain, and stiffness in a var
inflammatory, traumatic, and degenerative
loskeletal conditions. It also may act to norm
motor activity in certain neurologic disturba

Contraindications: Allergic or idiosyncratic
tions to carisoprodol.

Precautions: 'Soma', like other central ne
system depressants, should be used with ca
in patients with known propensity for takin
cessive quantities of drugs and in patients
known sensitivity to compounds of similar c
cal structure, e.g., meprobamate.

Side Effects: The only side effect reported wi
frequency is sleepiness, usually on higher
recommended doses. An occasional patient
not tolerate carisoprodol because of an indi
reaction, such as a sensation of weakness.
rarely observed reactions have included dizzi
ataxia, tremor, agitation, irritability, headach
crease in eosinophil count, flushing of face
gastrointestinal symptoms.

One instance each of pancytopenia and le
penia, occurring when carisoprodol was ad
istered with other drugs, has been reported, a
an instance of fixed drug eruption with carisop
and subsequent cross reaction to meproba
Rare allergic reactions, usually mild, have inc
one case each of anaphylactoid reaction with
shock and angioneurotic edema with respir
difficulty, both reversed with appropriate the
In cases of allergic or hypersensitivity reac
carisoprodol should be discontinued and app
ate therapy initiated. Suicidal attempts may
duce coma and/or mild shock and respir
depression.

Dosage: Usual adult dose is one 350 mg. t
three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white te
and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

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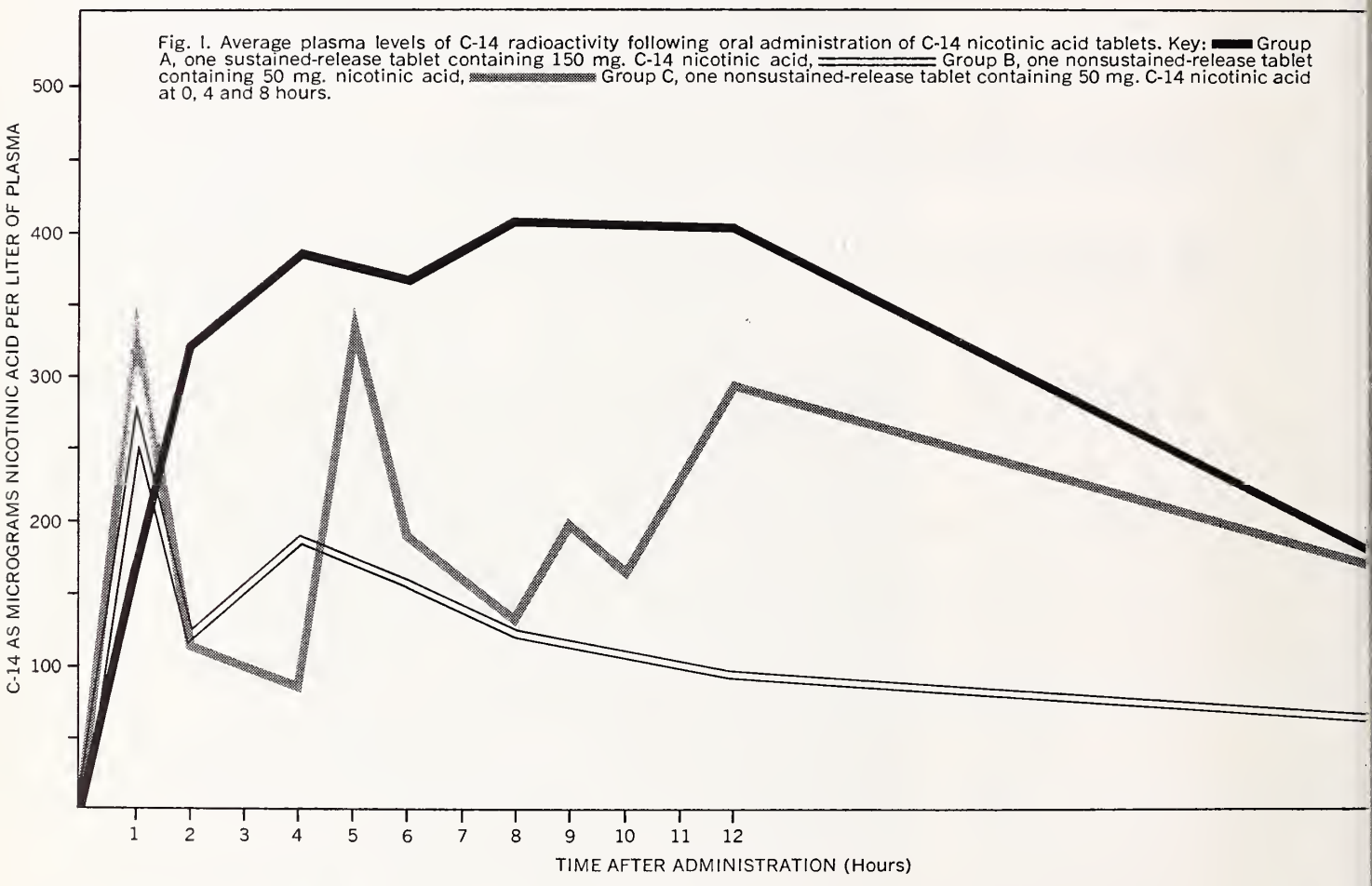
and cerebral stimulation for th



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be co tinuous on a daily dose of only one Geroniazol TT ta let every 12 hours.

The gradual release of nicotinic acid in Geroniaz TT will provide the well-known peripheral vasodilat tion needed in patients with deficient circulation ar with a minimum amount (if any) of "flushing." Als cerebrovascular circulation is complemented by pe tylenetetrazol, long-established as a cerebral and re piratory stimulant.

Geroniazol TT improves the typical, unfortunat signs of senile confusion. Patients become more ale

ged and debilitated

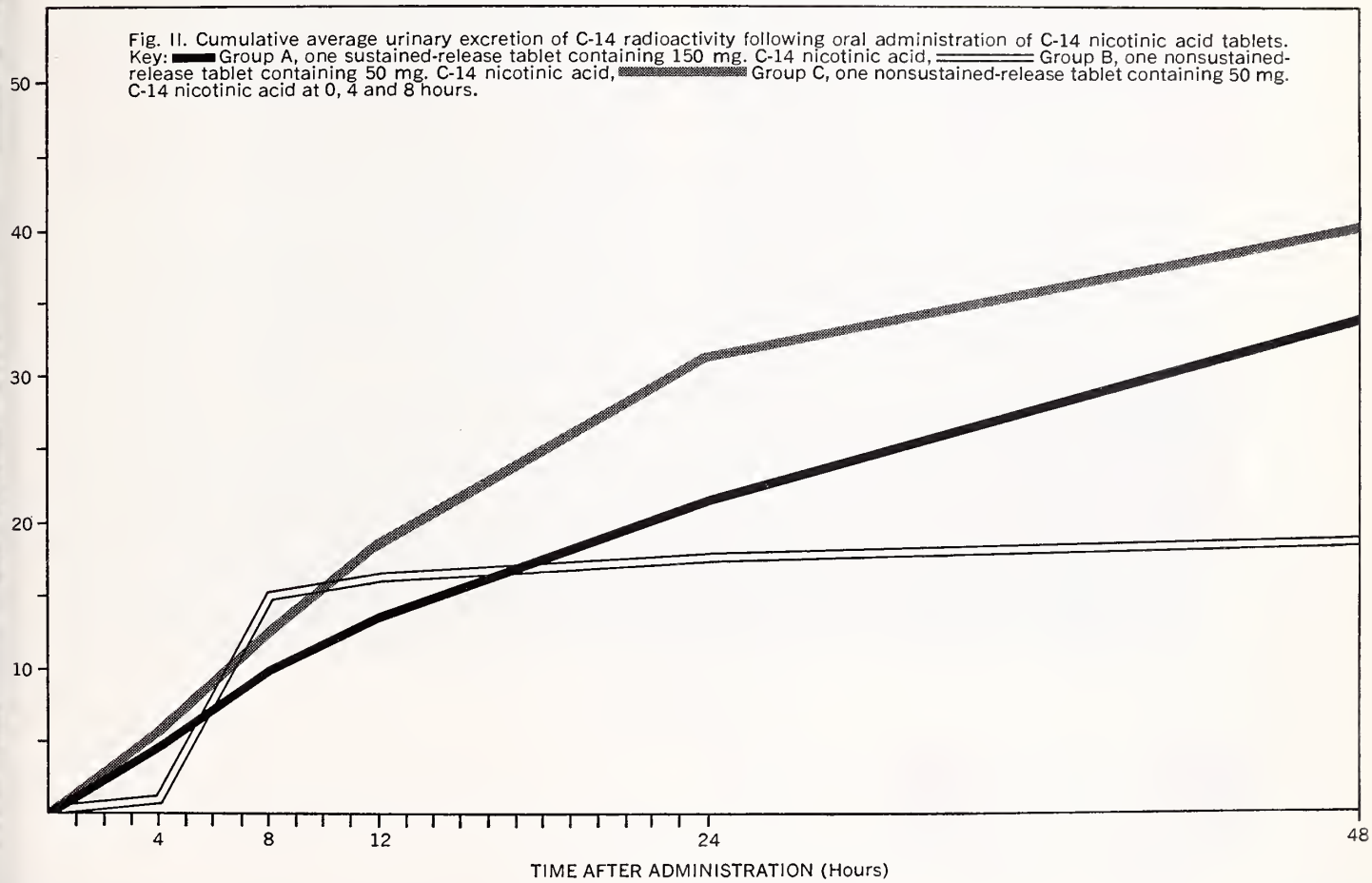


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ss confused and moody. Personal care, memory, motional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, t an economical price. Dosage is only one tablet every 2 hours.

ontraindications: There are no known contraindications.

recautions: Exercise caution when treating patients ith a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

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greater potency

lower mg intake per day

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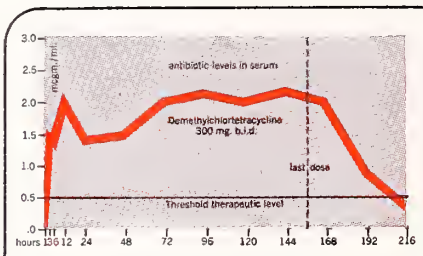
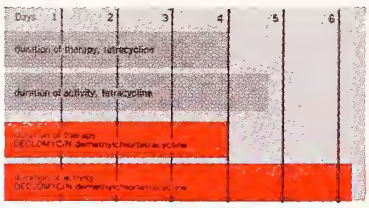


high activity

From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962



1-2 "extra" days' activity

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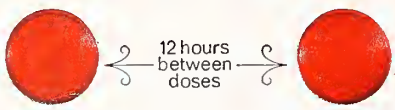

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Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

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The following is a brief precautionary statement. Before prescribing, the physician should be familiar with the complete prescribing information in SK&F literature or *PDR*. *Contraindications:* Comatose or greatly depressed states due to C.N.S. depressants and in cases of existing blood dyscrasias, bone marrow depression and liver damage. *Precautions:* Use with caution in angina patients and in patients with impaired cardiovascular systems. Antiemetic effect may mask symptoms of other disorders. An additive depressant effect is possible when used with other C.N.S. depressants. Prolonged administration of high doses may result in accumulative effects with severe C.N.S. or vasomotor symptoms. Use in pregnant patients only when necessary for the patient's welfare. *Side Effects:* Occasional cases of mild drowsiness, dizziness, mild skin reactions, dry mouth, insomnia and amenorrhea. Neuromuscular (extrapyramidal) reactions (motor restlessness, dystonias, pseudo-parkinsonism) may occur and, in rare instances, may persist. In addition, muscular weakness, anorexia, rash, lactation, hypotension, and blurred vision have been observed. Blood dyscrasias and cholestatic jaundice have been extremely rare.

For a comprehensive presentation of 'Stelazine' prescribing information and side effects reported with phenothiazine derivatives, please refer to SK&F literature or *PDR*.

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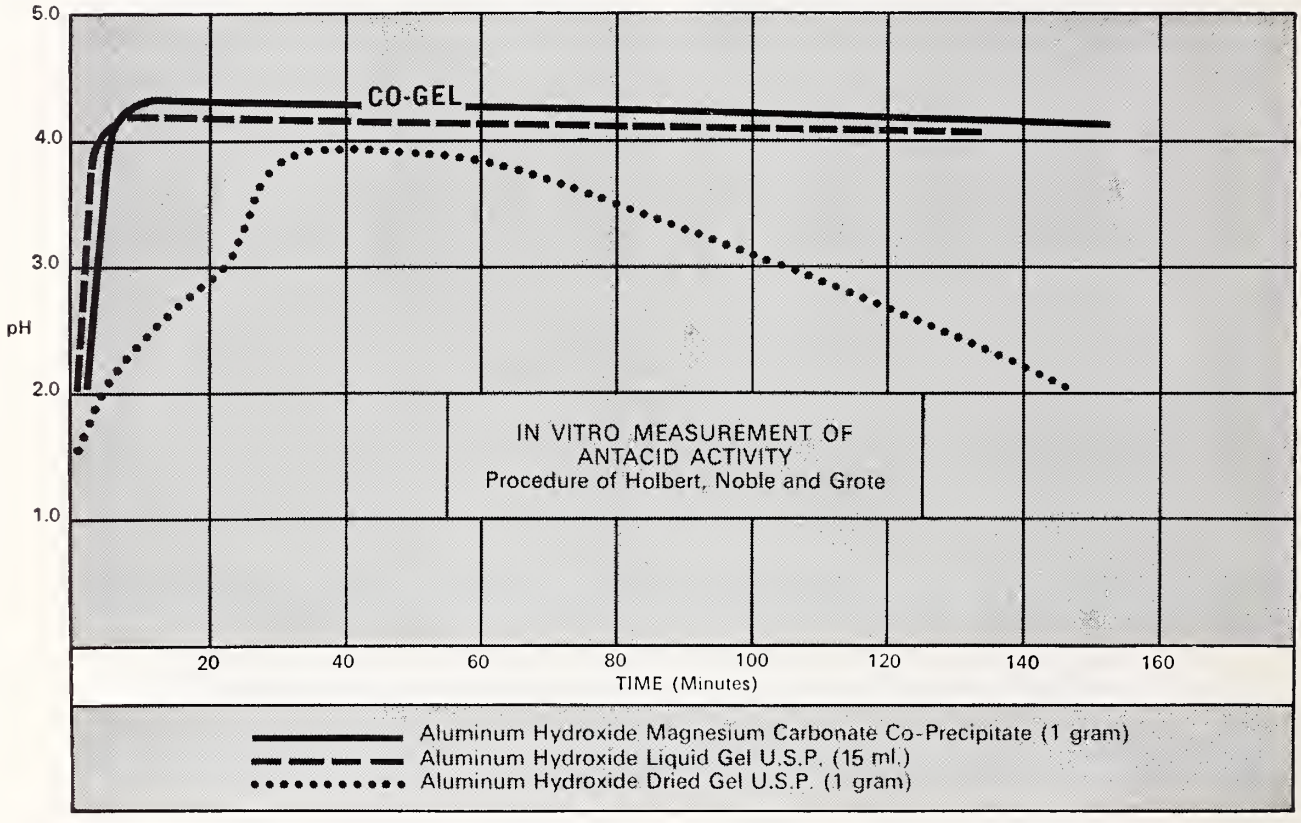
CO-GEL

THE NEW ANTACID



Holbert, J. M., Noble, N., and Grote, I. W.—Jnl. Amer. Pharm. Assoc. (Sci. Ed.) 37,292 (1948).

Now, an antacid tablet with the effectiveness of a liquid!

CO-GEL is not just another antacid, but rather it's an entirely *new antacid compound* for gastritis, hyperacidity and peptic ulcers. It is an Aluminum Hydroxide formulation with Magnesium Carbonate Co-Precipitate. The Co-Precipitate, a new chemical, gives CO-GEL Tablets the speed of action and the duration of a liquid antacid.

The above chart compares the antacid action of the COGEL Tablet formula with both liquid and dry $Al(OH)_3$. Notice that CO-GEL neutralizes acid faster than $Al(OH)_3$ dried gel tablets and has a prolonged buffering action. The CO-GEL curve parallels that of liquid $Al(OH)_3$.

Liquid CO-GEL, containing the Co-Precipitate, is also available. CO-GEL is reasonably priced to the patient. Availability: CO-GEL Tablets (bottles of 100 and 1,000) CO-GEL Liquid (pints and gallons).

For complete information and samples, write to Dept. IM-105

FORMULA

Each CO-GEL Tablet, and teaspoonful of CO-GEL Liquid, contains 330 mg. of Aluminum Hydroxide Magnesium Carbonate Co-Precipitate. Tablets have a chewable base. Both forms are mint flavored.

CONTRAINDICATIONS

None.

DOSAGE

For relief of hyperacidity, peptic ulcers or gastritis, chew one tablet (or take one teaspoonful). Repeat in 1 hr. if necessary.

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MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

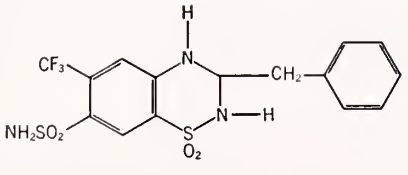
Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

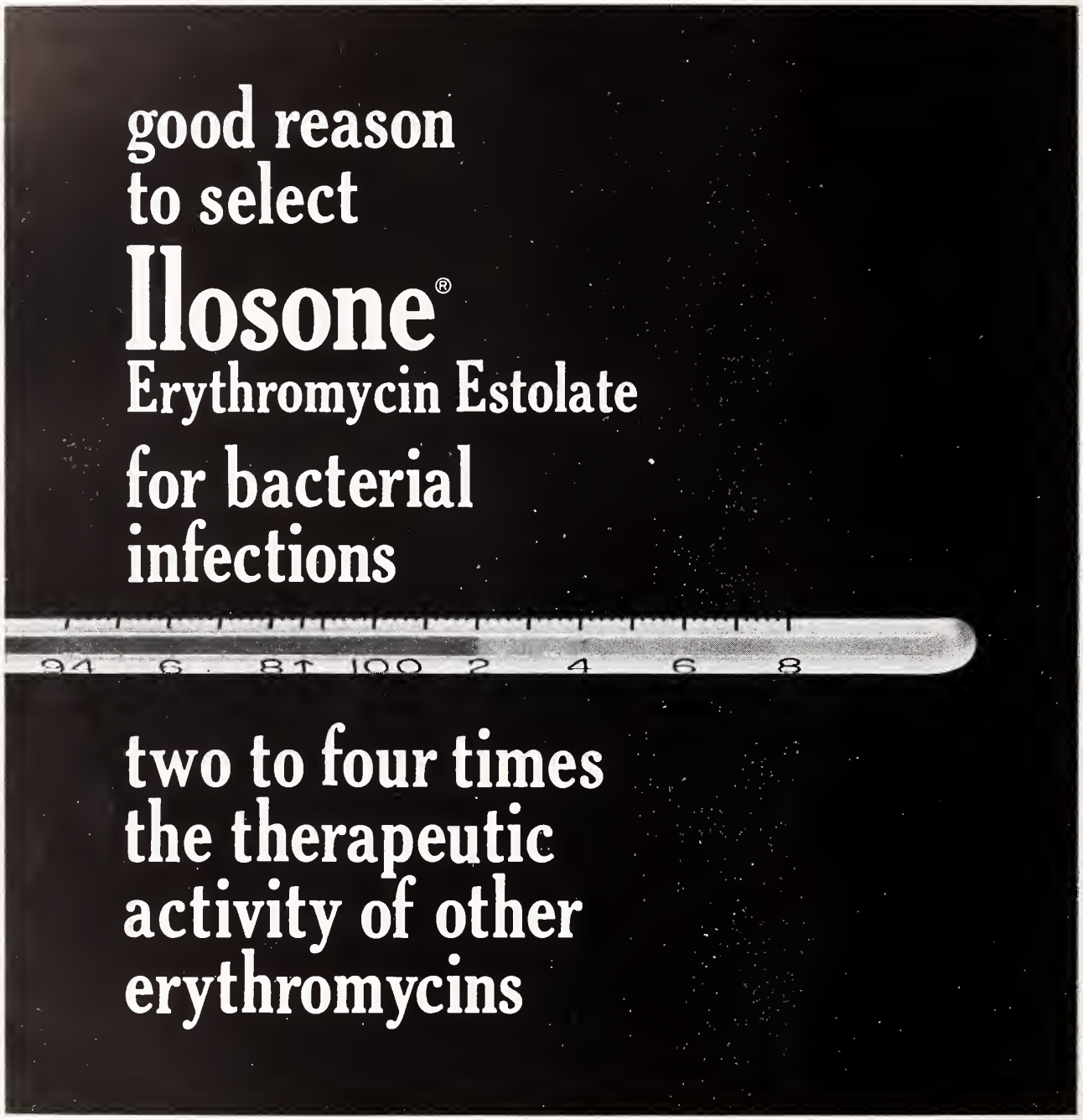
Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: **1.** Southworth, H.: Proc. Soc. Exper. Biol. & Med. *36*:58, 1937. **2.** Mann, T. and Keilin, D.: Nature *146*:164, 1940. **3.** Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. *144*:239, 1945. **4.** Schwartz, W. B.: New England J. Med. *240*:173, 1949. **5.** Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: Edema Mechanisms and Management, Philadelphia, W. B. Saunders Co., 1960, p. 259. **6.** Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: op. cit., p. 254. **7.** Werko, L., in Moyer, J. H., and Fuchs, M.: op. cit., p. 188. **8.** Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: op. cit., p. 274. **9.** Maren, T. H., and Wiley, C. E.: J. Pharmacol. & Exper. Therap. *143*:230, 1964. **10.** Earley, L. E., and Orloff, J.: Ann. Rev. Med. *15*:149, 1964. **11.** Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: op. cit., p. 276. **12.** Ford, R. V., in Moyer, J. H., and Fuchs, M.: op. cit., p. 290. **13.** cited in Fuchs, M., and Mallin, S. R. (ref. 11): op. cit., p. 283.



Naturetin®
SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid
or high blood pressure



CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
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Scientific Articles

Replantation of Extremities

G. RAINEY WILLIAMS, M.D.
Oklahoma City, Oklahoma

Despite a lot of lay literature on the subject of surgical replantation, it is very difficult, or perhaps impossible, for the conscientious physician to know at any given time where this sort of procedure fits into the surgical armamentarium.

I would like to try to summarize the information that is available, and to perhaps add some conclusions regarding the present status of surgical replantation.

One approach to this is to discuss four logical questions that might be asked about surgical replantation.

The first of these relates to technical feasibility, the second to problems of postoperative management, the third to the question of long range functional results, and fourth, and finally, to the team requirements for attempting surgical replantation.

TECHNICAL FEASIBILITY

Concerning technical feasibility, it is perfectly obvious that all of the surgical maneuvers necessary to reattach an amputated extremity have been standardized for many years. It is surprising that replantation was not attempted some years before it actually was, and there is still very little experience reported.

The case report from Boston stimulated our interest in the subject for a number of reasons.[1] We began our work in the surgical laboratory by looking at the available experimental evidence to see what had been done with regard to the replanting of an amputated extremity. We found two or three published series, but these did not really give us a good idea of what could be expected in terms of reliability.[2-5]

Amputation of the rear leg of dogs was done very carefully in the laboratory utilizing meticulous technic in order to keep the animal in the best possible condition. Under strict sterile technic the bone was sawed across and the blood vessels handled by ligating them and then cutting between the ligatures.

Once amputated, the extremity was simply put aside in the laboratory. No attempt was made to perfuse the extremity or treat it in any fashion except to try to keep it sterile. Following a period of time, the extremity was replanted.

Bone stability was achieved by using a plate plus a heavy intramedullary pin. We found that fixation was a matter of some importance. In the laboratory, as in the clinical experience, Dr. Gael Frank, of the Department of Orthopedic Surgery, worked out the technic and actually did the bone work.

The vascular anastomoses were performed using two standard vascular clamps, standard needle holder and five or six 0 silk depending on which was available. These anastomoses were carried out without use of microscopes or magnifying devices of any sort. Most of the anastomoses were done by Dr. Donald Carter, a resident in the laboratory at that time who had had no previous experience in vascular surgery.

In a total of 16 experiments, four animals failed to survive. The four that did not survive were animals who were under anesthesia for periods in excess of nine hours. Using nembutal in intermittent intravenous doses, it is not unusual to find that dogs will fail to survive a procedure of that length. These dogs simply did not wake up. We did not recognize any particular pattern to these deaths, and did not study the cause of death as carefully as I now wish we had. Of the 16 animals, 12 survived the operation and nine ex-

* Adaptation of presentation at Mercy Hospital Day, in Des Moines, Iowa, November 13, 1965. Dr. Williams is associate professor of surgery at the University of Oklahoma School of Medicine.

tremities survived. After the technic was fully developed, routine salvage of the extremity was clearly within the realm of possibility.

LENGTH OF TIME

The second technical problem had to do with the length of time the extremity might be disconnected and then be successfully replanted. From literature on the anoxia which various organs can withstand and survive, it is very clear that in the extremity the tissue most susceptible to ischemia is skeletal muscle. In other words, nerve, bone, and skin tolerate prolonged periods of ischemia better than do skeletal muscles. The work of Scully[6] and others, suggests that skeletal muscle will probably survive about six hours of total ischemia before irreversible changes appear. This conclusion ought to be tempered by three things. First, the work was done on animals, and there is a good deal of species difference in tolerable limits to ischemia. Second, there are so many variables involved (condition of the cardiovascular system at the time of the ischemic episode, the temperature, etc.) that this experiment is particularly difficult to control. The third thing to remember is that none of the methods of prolonging this period of ischemia were carried out in any of these animals. It seems likely, at least, that hypothermia and perhaps the use of perfusion of the extremity with one sort of solution or another might favorably influence this period of time.

In the laboratory animals in which the extremity was ischemic between one and four hours, two of five operations resulted in a viable extremity. These were the early procedures; there is no claim for statistical validity.

In the subsequent series in which this extremity was ischemic between four and six hours, six out of six viable extremities resulted. This simply illustrates that the six hour limit is well within experimental tolerance at least under the conditions of our experiment. One animal survived after the extremity was off seven hours and 45 minutes. In this animal the extremity did stay viable, and we were not able to separate it from the others on the basis of subsequent changes.

No survival occurred among those animals in which the extremity was ischemic eight hours.

POSTOPERATIVE MANAGEMENT

Once it is agreed that replantation is technically feasible at least up to six hours after amputation, the second major question concerns the problems in postoperative management.

The initial problem, of course, is maintenance of circulation. In the extremity which is reattached swelling appears very promptly, being quite evident at the end of 24 hours, reaching a maximum point at about seven days, and then gradually subsiding. In most instances swelling is not noticeable after a period of two weeks. We did not observe in animals that the swelling was ever sufficiently extreme to result in necrosis. In other words, it was possible within the first hour to detect those animals in which the extremity was not going to survive.

I did see a patient, however, in another city in Oklahoma who had a really massive injury, and actually it was a tribute to the surgical team that they were able to achieve any sort of replantation. In this patient the swelling did progress to a point where it was obvious there was no venous flow and gangrene was the outcome in a period of about four days. There is little question, therefore, that a major problem in the immediate postoperative period is edema, and that this edema may, at least, compromise the circulation to a critical point.

We have just two partial solutions for this. The first is the realization that venous anastomosis is the critical point in surgical replantation. I think we worry too much about the artery and too little about the vein. The second solution involves measures which might be taken to reduce the swelling. At the present time we depend first, on elevation of the extremity, and second, on surface elastic compression.

The second major point in postoperative management has to do with the metabolic impact on the patient. The crush syndrome has been studied relatively well under a variety of similar conditions. I would refer you to the work of Eiken in which the results of replanting an extremity after prolonged period of amputation were carefully studied from a metabolic point of view. They concluded that the cardiovascular signs and symptoms that are observed (an increase in the pulse rate, a fall in the arterial blood pressure, in other words, shock) are due to exactly what one might think, a fluid loss in the extremity. They demonstrated nicely that the animal can lose 20 to 30 per cent of its plasma volume in the extremity in a fairly short period of time, and concluded from this that the major problem from a metabolic point of view simply is the loss of fluid into the injured extremity. It probably is not quite that simple; there is very clearly a vasodepressor agent that accumulates in the ischemic tissue. It has been debated for a long period of time what this is, it is still not clear, but it is there. It has been demonstrated recently very nicely by Dr. Campbell and his associates for an entirely different reason. But, again, clinically we might draw the conclusions that (1) one has to be prepared for a sizeable plasma volume deficit in these patients, and (2) there is massive bleeding from this extremity. Usually there is very little blood loss up to the time the extremity is attached. When the arterial circulation is restored, the marked vasodilation that has taken place in the extremity leads to marked bleeding. In our animals the majority of the blood loss occurred just

as soon as the anastomosis was completed. I mention this only because I think it is quite unlikely that this procedure can be done without facilities for multiple transfusions. We are talking about four, five or six units.

The item which influences whether or not replantation is a good procedure, is the extent of peripheral nerve regeneration. It is certainly beyond the scope of my remarks here to go extensively into the care of peripheral nerve injury except to say that if one is going to do replantation, it should be realized that this is probably the most important single aspect of the patient's care. However, the principles can be summarized as follows: (1) maintenance of position of function, (2) protection against trauma, (3) necessity for early attention to the joints, particularly of the hand, and (4) we have thought, at least, that early and repeated galvanic stimulation of the denervated muscle is helpful. This is debatable, but at least it is the thinking of the people at our particular institution. Nevertheless, one has to be prepared to carry this out over a very long period of time, perhaps a minimum of two years.

LONG-RANGE RESULTS

Now the third major point to discuss is the long-range results. You cannot really decide whether or not surgical replantation is indicated until you know what the patient might be able to expect in terms of functional recovery. There have been only two cases of total replantation of the extremity reported in scientific literature. Unquestionably, there have been other cases done, but we do not know what the long range results have been. You are aware, I think, that the two cases done in Boston, one with a follow-up of approximately two years, and the other with a follow-up of approximately one year, have been carefully reported. In both instances the return of sensation and musculoskeletal function has been very encouraging. It is not 100 per cent, but it certainly is far better than any known prosthesis might have furnished these patients.

We fall back on a total experience of two instances to decide whether or not the long-range result is good or bad. I think that we will have to leave this by saying that more cases must be reported in detail over an extended period before we can really decide what the functional result might be.

We did try to study this in dogs, but it is not possible to give very good physiotherapy to dogs. However at least we might be able to get some idea as to what the animals do in the follow-up period. There are only two reports of animal series that discuss any long-range follow-up. One involves a Russian and was published in the New York Academy of Science publication. He reported that at the end of six months the dogs were perfectly normal. Perhaps dogs are different in Russia, but this certainly is not true in the United States.

The other series which has been done and which has been reported indicates approximately what we found in our own dogs.

In our experiment, six of nine animals were followed between 12 and 16 months. Of the six followed 12 to 16 months, four were bearing weight. The other two had severe contractures in the knee joint, which meant that they ran around on three legs with other leg tucked up underneath them.

Of these six dogs, two had persistent swelling. Both of these had infection at the site of the fracture line, and at autopsy this infection was around small bone fragments. In the human it would almost surely have responded to sequestrectomy. Three animals had draining sinuses, and these draining sinuses led to the fracture site in each instance and each was simply a chronic osteomyelitis at the fracture site. This, too, might very well have responded to treatment which was not given. We were simply trying to finding out what these animals would do. So our experience with dogs who got no treatment would indicate that a certain degree of functional recovery occurs, and so this topic is very much unsettled. Certainly one shouldn't get very enthusiastic about replantation until it has been demonstrated repeatedly that there is a sufficiently good functional result in terms of several years to make prolonged physiotherapy, time lost, etc. worthwhile.

REQUIREMENTS FOR REPLANTATION

Finally, we might say something about the requirements for replantation as the fourth major heading. The requirements for replantation include (1) a surgical team which includes people who are available in almost every sizable hospital, and (2) a surgeon who has the ability and the equipment to deal with a fairly complicated comminuted fracture. The exposure is superb, and this really is not beyond the realm of almost anyone who knows anything about orthopedics. Methods of fixation, of course, can be the subject of endless debate. There are probably several ways of doing this satisfactorily. There must be a surgeon, a vascular, general, or thoracic surgeon, with experience in dealing with peripheral vascular surgery. The simple routine methods should be adequate. Finally, we felt that it is quite helpful to have more than one general surgeon in order to carry out the procedures on the amputated extremity concomitantly with carrying out the procedures and debridement of the amputation site. So the surgical team in our own institution consists of (1) one orthopedic surgeon, and (2) three general surgeons, one of whom is a resident.

We might bring up three points that are important as far as this team goes. The first involves some knowledge of preservation of the extremity.

At this time there is very little data, but we have strong feelings that hypothermia ought to extend the permissible time between amputation and replantation. This simply can be done by immersion in cold water.

The second point is the necessity for careful debridement of both ends. The muscle damage with subsequent foreign body reaction and inflammation surely must add to the edema that is found routinely.

Thirdly, the team must have some idea of priority of repair. In animals, and in our single clinical experience, we felt the bone should be repaired first, followed by the veins, followed by the arteries, followed by the nerves, muscles and skin, in that order. One must remind the orthopedic surgeon to shorten this bone. Both Dr. Frank and I knew this at the time of our own experience, but everything looked so good we did not do it; then when we started to sew the muscles together, we had to stop and shorten the bone.

Finally, we think probably that the vascular bed of the extremity ought to be perfused by simple gravity perfusion. The end of a sterile I.V. extension tube is an ideal cannula. It fits very nicely into the artery. Our own choice has been Ringer's lactate to which we add penicillin or whatever antibiotic you prefer, and heparin.

Finally the team which undertakes to do this must have at its disposal long range facilities for very careful and complete physiotherapy.

I would like to tell you about the one case we have encountered because I think it illustrates a number of problems and perhaps emphasizes that there is some reason for optimism in the management of such injuries. This patient is a 20 year old college student at Oklahoma State University. Oklahoma State is a very basketball oriented school, and this was a 6′-9″ extraordinarily well-coordinated basketball player; this made him the subject of a great deal of interest to a lot of people, particularly at O.S.U.

He was working at an athletic dormitory and reached into a high speed water extractor. A piece of clothing apparently wrapped around his arm, and at extremely high speed this arm was simply torn off midway between the shoulder and the elbow. This is structurally the weakest point in the upper arm, and thus it occurred at exactly where you would expect it to occur. Incidentally, this is almost identical with the first case done in Boston.

Fortunately, the physician who was called to see this young man knew of our interest, and he called Oklahoma City within a few minutes after the accident. Also fortunately, the boy's roommate was a premedical student who actually knew something about the preservation of extremities primarily from an article in the state medical journal. He immediately put the arm in a tub of ice. The boy was in Oklahoma City, a distance of about 70 miles from Stillwater, within a couple of hours. He was in the operating room within three hours after the injury, and arterial flow was established almost exactly five hours after the injury.

The muscle and skin closure was perfectly routine in this young man. He was returned to the ward, and on the morning after the operation the color of his forearm was good and remained good.

In one week you could see that there was some swelling of the forearm. The finger color remained good. The cardiovascular state remained the same. He was started on physiotherapy within a few days of his injury and by the end of the week he was getting full rotation, movement of the finger joints, and he was beginning to get skeletal-muscle stimulation using a galvanic stimulator.

At the original procedure the nerves were tacked together because they were attenuated to quite a marked extent. We could not identify the distal radial and felt that further extensive dissection in this extremity might cause too much tissue damage.

Several months following the replantation he was reexplored. At this time, the median nerve was joined by direct suture after taking about a 10 cm. segment of neuroma out, and a free nerve graft was used to unite the ends of the ulnar nerve which had a neuroma of approximately the same length which even by rerouting we could not shorten enough. After another month and a half, the radial nerve was repaired using a second free graft.

At the end of a year by examining the patient it was apparent that the distal biceps were innervated. He had excellent shoulder and elbow motion. He now has movement in the finger flexors which is very definite and to a fair degree. He has no strength of consequence in the finger flexors yet. Several of the forearm flexors are now innervated, and he has a protective level of skin sensation down to the wrist.

It is too early to know exactly what his functional result will be, but if he continues at the rate he is going, it certainly will be satisfactory. This boy actually has lost little time from school. He went back to classes in January. He came up for his nerve graft procedures at convenient times and lost no significant amount of schooling as these procedures really only involved a hospital stay of a few days.

SUMMARY

Perhaps we can summarize by saying that replantation is a technically feasible procedure at the present time. If one does undertake this, the patient is committed to an extremely long-range physiotherapy and rehabilitation program. The third point, the degree of functional recovery, is still a matter for clarification, and until this is clarified, we need to be guarded about the indication for replantation.

Finally, I might point out that the technics and procedure learned or encountered in this maneuver may have application in other fields just around the corner.

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Mercy Hospital Medical Day

Questions and Answers

Dr. E. J. Drew: What did you use for the nerve grafts?

Dr. Williams: We used the median antibrachial cutaneous out of that arm for one and the saphenous nerve out of the opposite leg for the other.

Dr. P. R. Holzworth: What was it that necessitated the shortening of the bone?

Dr. Williams: The muscles.

Dr. Holzworth: How much shortening was done?

Dr. Williams: About an inch. Vascular anastomoses are easy at full length, but the muscles would not go back together. After 18 dogs we knew this, but at three o'clock in the morning maybe we do not think as clearly as we would like to.

Dr. A. N. Smith: What would be your thinking in an extremity that did not have too much soft tissue damage but an extremely comminuted bone? What would you do here?

Dr. Williams: Perhaps there are others here who would know more about this bone thing than I would. If there was any possibility of getting bone continuity by circumferential wiring, if necessary, I would try. I suppose that you might put intramedullary pins and leave a gap. These are things that I really do not know about. It seems to me that reconstruction of bone has reached a pretty advanced state. I would not like to let that stop me even if we had to shorten it with the idea of lengthening it later. I know there are a number of orthopedic experts here. Dr. Dubansky?

Dr. M. H. Dubansky: I would agree with you.

Dr. J. H. Kelley: I can add nothing further from my experience.

Dr. Drew: How long did you leave this man on anticoagulants following surgery?

Dr. Williams: I am sorry, I should have mentioned this. We did not use anticoagulants after operation in this boy or in the animals. I feel that an arterial anastomosis that is booming will seldom thrombose. I think the grief from the anticoagulants exceeds their value.

Dr. Drew: When you anastomose the arteries and veins, why do you not put some cellophane or glass cannulas in there and then later go in and take these glass cannulas out?

Dr. Williams: Well, of course, you realize that glass might not be first choice, but there have been numerous attempts to develop anastomotic tools. Some of you may remember the *Freyfogel couples,* a few years ago, and there are others including the Russian stapling device. I would submit that both of these vascular anastomoses could not possibly have taken more than 35 minutes apiece. What took all the time was the fact that when you reestablish arterial flow, the *Simeone* phenomenon is clearly demonstrated, unbelievable bleeding from the distal muscle edges. This boy was extremely muscular. His arm at the amputation site was as big around as my leg above the knee, and we lost four bottles of blood out of those distal muscle ends within a few minutes, and spent about three hours clamping and tying bleeders in the distal skeletal muscles. This was not as much a problem in the dogs because we clamped them on the way in. Much time involved is in cleaning up and suturing muscles back together. However, I agree with you that if something could be worked out to permit rapid vascular anastomoses, it would be nice. What the Russians are doing, however, is not just trying to do it fast, they are trying to arrange for technicians to do it. There are just too many people in Russia and too few doctors.

Unidentified: What about sympathetic block?

Dr. Williams: If this extremity wasn't denervated sympathetically, we will never see one. We talked about this, and there was just never any question but that the circulation in this extremity was all right.

I subsequently have seen the patient which I mentioned to you, so maybe now I would be a little more scared. This patient who failed did have stellate ganglion blocks, but was clearly a problem in inadequate venous return. This is why, incidentally, the partial amputations have done well. I am personally convinced that the reason why these extremities survive is that the venous

return is preserved. Bone would be an ideal place for venous return.

Dr. Kelley: What about the below the knee and below the elbow? Would the problems in this be about the same?

Dr. Williams: Well, I would try it below the elbow, John. However, I think that this whole thing regarding the lower extremities is questionable. This boy went to school with his denervated upper extremity. I can not imagine that you could do anything gainful with the totally denervated lower extremity.

Dr. S. W. Dusdieker: How do you get the blood clots out of the arteries? Or out of the veins if the arm has been off for an hour or so?

Dr. Williams: Well—we just hook up a standard I.V. and insert it into this. There is a sterile extension tubing that I am sure your anesthesiologists have. It fits nicely into the artery. Just let it flow by gravity. Surprisingly enough, there were no clots there. This is also true in animals. When we come down to it, we know an awful lot about why blood clots, but we do not know much about why it does not clot. Intravascular thromboses are still mysterious. Blood will stay liquid in isolated vessels for a long period of time.

Dr. H. G. Ellis: What criteria did you decide on for this amputation? Did you set up a criteria that has certain standards for certain conditions which you use to hang on to, or for what conditions to show up? I am thinking about the crush syndrome patients. How long would you let a patient go before you amputate?

Dr. Williams: Well, I think that any time I thought the patient's life was in danger from the extremity, I would amputate. Ordinarily, however, I believe this would be when I did not think that extremities would stay viable and survive. I think if they are really questionable, they are going to have to go. We all have difficulty in making this decision, probably we should not have, maybe this is the time to get somebody else to come and look.

Dr. J. L. Molchan: What do you think that interruption of the lymphatic channels has to do with the development of the edema?

Dr. Williams: I am not sure, but I am sure that it has some.

Auto Fatalities Increase

A worldwide increase in motor vehicle accident deaths during recent years is evaluated in a summary appearing in a recent issue of the Metropolitan Life Insurance Company's STATISTICAL BULLETIN.

In the United States the motor vehicle accident death rate has increased each year since 1961, from 20.8 per 100,000 population to 24.5 in 1965, a jump of 18 per cent in the short span of three years. Canada, where the upturn started a year earlier, recorded a 22 per cent increase in four years, from 20.7 in 1960 to 25.3 in 1964.

Even sharper rises have taken place in some European countries. Finland and Italy registered increases of about 40 per cent between 1959 and 1963, with accident death rates in the latter year only slightly below those in the United States. Both France and Sweden experienced increases of 25 per cent during the period 1959-64. The upturn was more moderate—15 per cent—in England and Wales, where the rate in 1964 was 15.3 per 100,000.

In 1963 the motor vehicle death rate per 100,000 persons in Japan was 15.7, nearly a third higher than that recorded in 1959. Australia and New Zealand registered relatively small increases between 1959 and 1964.

When the degree of motorization is considered, the United States, which leads all nations in number of motor vehicles per 100 persons, has the lowest accident death rate, 52.6 per 100,000 registered motor vehicles. Pedestrian deaths accounted for 17 per cent of the total number of motor vehicle deaths in the United States.

Among the countries reviewed, Japan had the highest death rate based on motor vehicle registrations—402 per 100,000 vehicles. Even though the number of cars in that country had increased fourfold since 1959, there were only four motor vehicles per 100 persons in 1963. It is probable that many new and inexperienced drivers contributed heavily to the toll. As in other countries where there have been sudden large increases in the number of motor vehicles on the road, it has not been possible to construct the necessary good roads quickly enough nor to enact the traffic laws required to meet the changed conditions.

Offer Heart Booklets

Four new booklets concerned with major aspects of heart examination have been issued by the American Heart Association and are available for use by interested physicians.

The series, a project of the Association's Committee on Medical Education, is entitled EXAMINATION OF THE HEART, and replaces a single book of the same title which is now out of print.

The booklets are divided in subject matter as follows:

PART ONE: HISTORY TAKING by Howard B. Sprague, M.D., Boston.

PART TWO: INSPECTION AND PALPATION OF VENOUS AND ARTERIAL PULSES by Noble O. Fowler, M.D., Cincinnati.

PART THREE: INSPECTION AND PALPATION OF THE ANTERIOR CHEST by J. Willis Hurst, M.D., and Robert C. Schlant, M.D., both of Atlanta.

PART FOUR: AUSCULTATION by James J. Leonard, M.D., and Frank W. Kroetz, M.D., both of Pittsburgh.

Copies may be obtained from the Iowa Heart Association, 529 Thirty-sixth Street, Des Moines, Iowa 50312.

Use of Silver Nitrate In the Treatment of Burns

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EACH YEAR OVER 7,500 INDIVIDUALS in this country die of thermal injuries. Somewhere around 30 per cent of these are children. When you look at this in terms of productive years in society, you discover we are losing many productive years from the most important age group in our population. Nearly as many people die of burns in this country every year as die of cancer of the head and neck. Thousands of hospital beds in this country are constantly occupied by the burned.

The mortality rates from major thermal injuries have changed very little in the last 35 or 40 years. This is particularly true for injuries which cover 40 per cent or more of the body surface. There has been some improvement in the relatively smaller injuries, i.e., in cases covering 30 per cent of the body surface or less. These, however, still carry a rather significant mortality. Roughly, as of last year at least, a burn of 50 per cent of the body surface was lethal half of the time.

The last improvement in burn mortality came as a result of the work of Sneve in St. Paul. Sneve reintroduced the intravenous infusion of saline solution in the treatment of burn shock. Sneve also used the exposure method of treatment of the burn wound. It seems quite clear, however, in retrospect that the improvement in mortality Sneve was able to obtain in St. Paul was unquestionably due to effective resuscitation of his patients during the first three days after the injury.

The first problem that one faces in treating a burned individual is this *unhinging of life,* or if you will, this problem of burn shock. Blalock in the 1930's reemphasized the importance of fluid loss into the areas of the injury. Since that time physicians in general have been able to resuscitate individuals in burn shock rather regularly by the infusion of large amounts of either saline or colloid containing solution. At present there is some disagreement about the best way to treat burn shock. There are those who give colloid solution, i.e., albumin, plasma, or blood in rather large amounts according to the Evans or Brook formulas with which you are familiar. Others feel it is feasible and satisfactory to resuscitate even those individuals with the largest of injuries using nothing but a balanced saline solution-lactated Ringer's solution.

One thing I would like to emphasize is that it is perfectly possible to resuscitate satisfactorily most burned patients without using large amounts of blood or colloid.

As I have tried to imply, relatively few people today die during the first three or four days after the injury. This means one must come to grips with what is causing the mortality which is still quite large. I think most would agree that bacterial colonization of the burn wound is unquestionably responsible for most of the mortality that attends these injuries today.

During the past 15 years, largely due to the work of Kinney, Moyer, Moncrief and others, knowledge has come to light which indicates that burned human and animal skin leaks water vapor at rates that are sometimes 30 times the normal rate. You all know that the insensible loss of water in the normal human being amounts to some 6 or 8 hundred milliliters a day. A small proportion of this loss is through the lungs, but the majority of it is through the skin, simply by evaporation of water through the dermis. Burning an animal's skin removes this barrier to water vapor loss. For each milliliter of water that is vaporized at 37° C. over half a large calorie is required. This means that a large burn imposes a tremendous caloric requirement on an individual simply for him to be able to maintain a stable body temperature.

The insensible water loss in an adult with a burn of 60 or 70 per cent of his body surface may be three, four or five liters a day—with nearly 0.6 of a large calorie being required for each milliliter.

In the case of one individual with a burn that covered 85 per cent of his body surface, his wound was treated by exposure during the first five days. The difference between his fluid intake and his urinary output, that difference being roughly his daily insensible loss of water, was 4 liters daily. This individual was immersed in a bath of warm

Adapted from a presentation made at Mercy Hospital Medical Day, in Des Moines, Iowa, November 13, 1965. Dr. Monafo is an instructor in surgery at the Washington University School of Medicine.

saline. When this occurred, the loss of water dropped precipitously to normal or near normal ranges. Here, then, is a possible way to improve one source of morbidity and mortality in burns. That is, one can eliminate this enormous caloric load that the burn imposes. One can eliminate it certainly by immersing an individual in a bath of saline. Coverage of the wound with a homograft can be shown to do the same thing. I want to point out, however, that this leak of water vapor will persist until the wound is healed or nearly so.

Despite the wide variety of antibiotic substances introduced in the last 25 or 30 years, all of which have been used in a variety of ways to treat burn wounds, there has been little demonstrable beneficial effect of any of the antibiotics in preventing colonization of the wound by bacteria, invasion of the wound and, ultimately, septicemia and death.

We immersed patients in saline baths, and did so for some time, in order to control vaporizational loss of water. We found that these people were quite comfortable, they ate well, their insensible losses were quite normal—but the wounds macerated badly when immersed in saline constantly, and became heavily colonized with bacteria, and these patients died regularly of sepsis.

We, therefore, were led to look for other means of controlling bacterial growth. We were led to try or re-try, I should say, the known bacteriostatic and bacteriocidal properties of silver, and in particular, of silver nitrate.

Bilroth in the 1880's had recommended silver nitrate in the treatment of burns. Bettman, on the west coast of this country, in the 1930's used silver nitrate in concentrations of 10 per cent in conjunction with tannic acid in the treatment of burns. The bacteriologists since late in the nineteenth century have been very well aware of the pronounced antibacterial effects of silver. As little as one part of silver per million of water under the proper circumstances in a laboratory will render it sterile. So, it is an effective *in vitro*, antibiotic material. It has been used in clinical medicine elsewhere, of course, in the treatment of relatively small but heavily infected, ischemic and varicose ulcers and this sort of thing. Urologists have used it for years to irrigate bladders. It was utilized in newborns' eyes until it was superseded by penicillin as a preventative against gonorrheal infection. So, there were certain suggestions that perhaps it might be effective. However, the history of the topical therapy of the burn wound has been replete with mystery, magic and non-scientific and nonobjective methods of treatment. Little control was exercised, and no attempt was made to be certain that the material used was not actually harming the individual. Tannic acid is an example of this. It is a potent hepatotoxin. The triple dye method was used because of the affinity of these dyes to bacteria, but they proved to be completely ineffective in actually killing the bacteria at rates high enough to keep their numbers down on the wound.

We tried to compile a hypothetical list or set of criteria that one could lay out for the ideal topical antiseptic on a large open wound. Some very simple things come to mind right away. Availability, price and effectiveness are factors, but another matter which has been neglected is this: The material must certainly not interfere with the healing of the wound. After all, you can sterilize any surface with phenol, if you will, but this unfortunately destroys the unburned tissue. So, we wanted to be certain we were doing no further harm. The experience with 0.5 per cent silver nitrate solution in small wounds indicated that epithelium would indeed grow from the edges of the wounds continuously covered with this material. In addition, since the salts of silver are on the whole highly insoluble, particularly the chloride, we were led to believe there would be little absorption of this material, if any, from the wound. Again, an advantage. One disadvantage, of course, is that it stains literally everything it touches. The decision was made, however, to try to utilize this material in a dressing which would be large, thick and well saturated so the vapor pressure of water in the dressing would be high. In this way we could combine and could attain both objectives we were seeking. That is, we could perhaps control vaporizational water loss at the same time we were achieving bacteriostasis on the wounds.

This dressing is an inch or an inch and a half thick. There is a gradual decrease in the temperature from the wound interface out. However, beneath the sheet covering the patient there is a constant increment in temperature, a little thermal trap, if you will. It is important from a physiological standpoint to point out the need for a covering of the dressing by a dry sheet or blanket. Patients with large wounds simply will not let you wrap this dressing on, wet it and leave them open, because they are extremely cold and uncomfortable. They should have this little thermal trap, this little cocoon of heat surrounding them.

The *in vitro* use of 0.5 per cent silver nitrate solution against strains of Pseudomonas aeruginosa and Staphylococcus aureus isolated from burned patients inhibited the growth of both of these bacteria in concentrations considerably less than those which we were using and intended to use. In a 0.01 per cent concentration, for example, there was no growth of Pseudomonas aeruginosa, a frequent offender in burn wound sepsis. At 0.06 per cent, the Staphylococcus aureus in one instance was inhibited by the silver nitrate.

Let me describe what can be accomplished utilizing silver nitrate. A 35-year-old man was sent to us one week after he burned himself. His clothes actually burned off. The wounds were covered with green odoriferous material. This individual was febrile and quite sick. In short, although

only seven days had elapsed, his wounds were heavily colonized with pathogenic bacteria.

On the seventh day there were already 100,000,000 bacteria for every square centimeter of wound surface. The treatment with silver nitrate solution was begun in the way that I have described it. There was an initial striking drop in the number of bacteria, from 100,000,000 to 10,000 per square centimeter. This was followed by a declining figure, a phase of modest recolonization of the wounds, and then a persistence of somewhat lower levels until the wounds had healed.

I use this case to point out the importance of the control of bacteria and the fact that it is possible to document in the bacteriology laboratory whether the treatment that one is using is in fact favorably affecting the wounds.

The nutritional state of this patient remained good throughout his convalescence. He lost little weight. He ate well, and in general he was not sick once the amount of bacteria on his wounds was decreased to a reasonable level.

In another case, a 36-year-old man who also was burned by flaming gasoline, the burn covered about 40 per cent of his body surface. The silver nitrate was poured over the man's dressings every two hours. These people are literally wet all the time. The remarkable thing about it is the degree of comfort they have as long as they are covered. The silver nitrate after 24 hours will form a precipitate of silver salts on the surface of the wound.

This man's small finger was burned so badly that it was adjudged to be useless and was simply amputated on the ward. This amputation was carried out by using a wire tourniquet and tightening the wire progressively over a few days until the finger was ready to drop off leaving a granulating stump. This, in our experience, has proved to be a quite satisfactory way of handling minor amputations.

After 22 days most of the face had healed, and one hand was beginning to be covered with epithelial buds arising from the dermal remnants in the depths of the wound. The precipitation of the silver salts on a granulating wound usually results in a somewhat different color and appearance.

I want to emphasize that the more experience we gain, the more we are convinced that we really do not know what a third degree burn is. That is, many burns that we, in the past, judged to be through the full thickness of the skin, and in apparent need of grafting for healing, we find to heal spontaneously from the depths beginning anywhere from 30 to 80 or 90 days after the injury. We attribute this to the salvage of epithelial rests in the hair follicles and glands at the base of the wound; salvage from destruction by bacterial invasion.

This man had no blood transfusions given throughout his convalescence. He had no general anesthetic. He lost 18 pounds in weight. He was 200 pounds initially. He had very little sign of systemic illness. This is the most prominent feature when bacterial growth has been successfully controlled, and when the vaporizational losses of water are reduced to reasonable levels—most of the signs of systemic illness simply are not present. Anemia is not severe. Fever is certainly less hectic, and many times it is absent throughout the convalescence. Skin grafts take readily and the appetite is excellent. A regular diet is all that is required.

Before I go any further I want to be absolutely sure to emphasize certain of the disadvantages of this treatment.

As I mentioned previously, the salts of silver are almost universally insoluble, particularly the chloride. For this reason, it is impossible, at least using conventional simple technics, to dissolve silver nitrate solution in biological fluids. One simply ends up with a precipitate of the salts, the carbonate or chloride of silver. For this reason, distilled water is used. The concentration of silver in the dressing in the fluid is only 29 mEq. per liter. There is no other ionic material except the nitrate. This means that a sharp gradient of sodium, potassium, calcium, and, in short, all of the water soluble minerals, and vitamins, exists between the wound interface and the dressing. In fact, when one covers a large open wound with this dressing and keeps it wet, the serum sodium concentration, for example, can be reduced dramatically and dangerously in just a few hours, particularly when the wound is very large and relatively superficial. For this reason, it is necessary—it is *mandatory*—to supplement the diet of these individuals with these minerals, i.e., salt, potassium in one form or another, calcium, and magnesium, in addition to water soluble vitamins. These are the supplements we have used to date. Perhaps there are other deficits which exist that we have not recognized yet. However, as experience grows, it becomes perfectly simple to do this satisfactorily. One can replace the needed minerals orally, and by the use of frequent serum electrolyte determinations, one can titrate these individuals satisfactorily. And this has been done on several occasions I know of in smaller hospitals, and done quite satisfactorily. I am talking about an adult say with a burn of half his body surface. Such a man might need to take 15 Gm. of salt a day, perhaps a 100 mEq. of potassium orally daily. These are fairly large supplements, but they can be taken, and they are reasonably well tolerated and do not impede the treatment.

The other disadvantage, particularly on an open granulating wound, is that silver nitrate causes paresthesias that last for fifteen minutes to half an hour. We have, for an unknown reason, seen less

of this recently, but we never have seen it so severe that we have had to discontinue the treatment.

Silver fortunately is not an allergenic material so that one does not have to worry about inducing a sensitivity to it. We certainly have not observed such a phenomenon. Now, if silver were absorbed, one would expect the blue or gray discoloration we have all seen in people who have chronically ingested argyrol or some other proprietary silver preparation.

As I have tried to imply, the absorption is, or should be minimal on theoretical grounds from the wounds, on empiric grounds. On practical grounds I should point out that we have not observed argyria in any of our patients.

Mercy Hospital Medical Day
Questions and Answers

Dr. Ala E. Daghestani: What about the daily fluid requirements in these patients? Do you have a routine method of administering fluid?

Dr. Monafo: Do you mean during the period of burn shock?

Dr. Daghestani: During the period of burn shock and immediately following.

Dr. Monafo: You want to know the volumes of fluid, of saline solutions that are necessary to resuscitate someone. Is that it?

Dr. Daghestani: Also with this method of treatment is less fluid required than would be otherwise?

Dr. Monafo: No, I do not think it is less at all. Let me put it this way. The volume of fluid that is necessary to resuscitate someone is so variable from patient to patient, at least in our experience, that it is extremely difficult to say in any individual case, "This man needs more fluid than the last one." For example, one of the cases I described was treated for three days. During those three days, he received 12 liters of lactated Ringer's solution for the treatment of his shock and that was all except for a small amount of salt solution that he took by mouth. We recently received a patient with a burn almost precisely in the same area and perhaps a little deeper than the previously mentioned case, but this man needed nearly twice as much fluid during the same time period. So, you see, I really cannot answer your question. I cannot answer it in one way anyway.

Dr. Edward J. Drew: Do you have any pictures showing the dressings on?

Dr. Monafo: I do not. Perhaps I could describe them to you. It is a loosely woven nine-inch wide mesh, four ply gauze. Simply roll it out into four or five foot lengths and make four or five thicknesses of it, and then cut it. Then roll it, take a basin, fill the basin with silver nitrate, wet the dressing first and then simply roll it on. One can change the dressings in just a few minutes. To hold the dressings on the wound we simply use bias cut stockinette just to ensure good contact on all the burned area. The dressings that we use are made by Bauer and Black.

Dr. Drew: How often do you change these dressings?

Dr. Monafo: We change them at least once a day and during the period when the eschar is coming off on the dressings to some extent, we may change it four times a day.

Dr. Drew: Is most of your grafting done under local anesthesia?

Dr. Monafo: Practically all of it is under the usual circumstances; I would say 90 per cent or more of the time.

Dr. Drew: Is it not hard to use dermatone with novocaine injected into the skin?

Dr. Monafo: This is a little dermatone that Castrovieso designed. It is a very light instrument. It hugs the contour of the skin very well, and it is no problem.

Dr. Daniel F. Crowley: How big are these flaps?

Dr. Monafo: We have used 0.3 mm. Rather thin.

Dr. Crowley: How long do you wait before you start grafting?

Dr. Monafo: We feel very strongly that it is important not to disrupt the granulation barrier that exists after two or three weeks. That is, to remove the eschar only through planes of tissue that are not alive. If we draw blood when we attempt to remove a piece of eschar, then we simply stop in that area. If you control the bacterial growth on and under the eschar, it tends to adhere somewhat longer to the wound. So that, although in some instances the eschar may start to come off during the second week, at other times, it may not come off until the fourth week. We start to graft as soon as there are any areas devoid of eschar. We do not wait in other words, but will graft immediately adjacent to areas that still have eschar. Does that answer your question?

Dr. Crowley: Is it necessary to start this grafting within a week or two?

Dr. Monafo: No.

Dr. Crowley: Do you have to tape these grafts down?

Dr. Monafo: No, we just lay these grafts on as little stamps. We simply continue changing the dressings in the same way.

Dr. Crowley: Do you allow the grafts to remain

in place for awhile before changing the dressings?

Dr. Monafo: No, you continue changing the dressings as usual, but you must be very careful when you do this. If the graft is going to stick, it sticks, and changing the dressings in 18 or 24 hours, in our experience at least, does not seem to differ from when we were waiting longer. You know we were afraid of this, but we found that the graft take was distinctly better when we changed the dressing more often and sooner.

Dr. James W. Chambers: Do you try to maintain aseptic conditions in the room?

Dr. Monafo: No. Well, we do in a way. The dressings are not sterile. They are not packaged sterile, and they are not really handled in a sterile manner. We wear gloves to protect ourselves more than for any other reason. These gloves are soon not sterile. Now, we have done some bacterial counts of the ambient air in the patient rooms. Despite their rather nasty appearance, the air in the rooms contains only twice the number of bacteria that we can find in the air in our operating rooms. It contains roughly the same number of bacteria in the ambient air as there are on our general ward.

Dr. Chambers: I have another question in a little different vein. Does the mortality particularly change with the location of the burn, that is, fronterior from posterior, front half from rear half, upper half from lower half?

Dr. Monafo: I do not know of any good data on this subject. I think a burn of the lower half of the body tends to be more serious, presumably because of its proximity to the perineum. But this is just an impression, I do not know of any data.

Dr. Leo R. Pearlman: Do you try to keep these dressings moist all the time?

Dr. Monafo: Yes sir, we keep them *wet* at all times. You see, if you do not keep them wet all the time, the water evaporates and leaves silver. If you let the concentration of silver build up too high, it will kill the growing skin. We know, for example, that 3 or 4 per cent silver nitrate will kill newly growing skin.

Dr. Pearlman: Just how often is it necessary to change these dressings and how often do you have to moisten them?

Dr. Monafo: We wet them every two hours and change them daily.

Dr. Pearlman: Do these people experience any discomfort?

Dr. Monafo: They are extremely comfortable between dressing changes.

Dr. Pearlman: With regard to dressing changes, is this not quite painful? How much sedation do these people require?

Dr. Monafo: When you change the dressing, as you might expect, it hurts. But, if you take your time it can be done without too much pain. We do use narcotics, I would say about two-thirds of the time. A single dose is given for the dressing change.

Dr. Pearlman: What concentration of silver nitrate do you use?

Dr. Monafo: Silver nitrate 0.5 per cent.

Dr. Marvin H. Dubansky: Do these people have to have almost constant nursing care?

Dr. Monafo: No more than is necessary for the usual burn case treated in any other manner.

Dr. Dubansky: Why not use the silver nitrate in a bath to eliminate the dressing changes?

Dr. Monafo: If you put the patient into a reservoir of silver nitrate then you have really got a tremendous sink of hypotonic material. We have never tried it because we have been afraid of depleting them of sodium so rapidly that we could not keep up with it even by intravenous administration.

Dr. John H. Kelley: Has there been any tabulation made of man hours for the management of this type of patient? Has there been anything compiled on this in terms of patient care?

Dr. Monafo: There is no easy way to do this. There is no easy way to take care of a burn. I know that exposing a wound, for example, is easier in a sense—it does take less man hours, but we have done numerous careful bacteriological studies, and if you leave a wound open it invariably is colonized heavily by gram negative bacteria within just a few days. I mean on the order of a hundred million bacteria for every square centimeter. There is no easy way to take care of a burn that I know of. I wish that I could tell you one.

Dr. James W. Chambers: Could this method be applied to ward use? For instance, in case of mass casualties? In the event of a huge explosion that would involve a good many people?

Dr. Monafo: Yes, we have been forced to treat patients on our general ward because we have not had room in our special burn unit. We have done this many times. Now, I do not want to over-emphasize the intricacies of the nursing care. On our ward we just have an attendant do this wetting —and the dressing changes, for that matter. There is nothing really complex about it. There is nothing that really takes more time, however, than good care of any burn patient.

Dr. Noble W. Irving: How do you handle this on the face?

Dr. Monafo: In the same way.

Dr. Irving: Do you use continuous dressings?

Dr. Monafo: Yes, continuous dressings. We do not encourage them to swallow it, because if they swallow enough they will turn blue. We do not pour it into the eyes for the same reason. But we do dress the face in the same way. It is a thick wet dressing.

Dr. Stanley Dusdieker: With regard to patent blue dye? What place do you think it has in the treatment of burns? How about its use to help determine the degree of the burn?

Dr. Monafo: I have not used it. I do not think it

has any place personally. No one I know of with wide experience in burns feels he can tell what the true depth of the wound is, particularly on the first day, unless it is either extremely superficial or extremely deep. I think these wounds heal from the base because of the few little epithelial cells at the base. The patent blue dye is not going to show you whether those little microscopic rests are still there, I do not think.

Dr. Verne L. Schlaser: Do you turn your patients, and how often? Do you have a routine procedure as far as the turning of these patients is concerned?

Dr. Monafo: Yes, we get them up and walking and standing as early as we can. The circle bed is ideal for turning. You see they just turn over on that frame. We turn them three or four times a day after the shock period is over.

Dr. Meredith R. Saunders: Do you do anything more about the hands in terms of function?

Dr. Monafo: No, the dressing on the hands is the same as the dressing everywhere else. We have completely abandoned excising eschar on the hands —completely. We have been most pleased with the results that we get. We do, however, encourage them to move their hands at the time of the dressing changes, and we start physical therapy as soon as there is a reasonable amount of epithelium on the hands.

Dr. Saunders: Do you treat patients on an outpatient basis?

Dr. Monafo: Yes, I mean burns of about 15 per cent of the body surface. We have routinely been treating scalds of this size as outpatients in adults. It works out extremely well, and the wounds are regularly healed in about 12 days. Of course, many of them would heal anyway. I do not mean to imply they would not, but there is no cellulitis in the wounds and perfectly regular healing will occur with fantastic rapidity.

Dr. Chambers: Did I understand you to say that you do not use antibiotics or that you are actively opposed to antibiotics?

Dr. Monafo: No, I said initially that the use of antibiotics had not affected mortality rates. Now, what we have done in fact is to give these individuals both penicillin orally and oxacillin throughout the convalescence and we have done this on the grounds that we know silver is precipitated on the surface of the wound. However, we know from our cultures that we do not have sterile wounds. There are always bacteria there. We know that streptococci and staphylococci have a propensity for dermal lymphatics. On these grounds we have given these two drugs as prophylactic measures. What importance they have I cannot tell you because I have no control on this at all.

Dr. Howard G. Ellis: How do you determine the criteria for frequency in changing your dressings? Do you follow a set routine?

Dr. Monafo: Well, it depends upon how soiled the dressing is. Certainly I would think it should be changed at least once a day, minimum. In most patients we change twice a day for the first two or three weeks and then perhaps three times a day throughout the rest of the convalescence. Occasionally, we change them every four hours, or even every two hours. Now, I do not want to imply that we have all the problems solved either because we still have, in patients with larger burns, even patients whom we have treated from the beginning, those who develop sepsis and die. I do think, however, that unquestionably this is occurring now only in extremely large burns, those over 60 to 65 per cent of the body surface, and then perhaps with somewhat less frequency than it did in the past. An individual now with a burn of 30 to 40 per cent of the body surface, we do not expect to be sick during the convalescence, and we do not expect to sustain any significant mortality with burns of that size. I do not think we are.

Dr. James C. Mooney: Could you use hypothermic treatment with oxygen?

Dr. Monafo: Well, I suppose you could do it. But I do not see quite at what that therapy would be directed. I have had no experience with this.

Dr. Drew: Do you use this in the treatment of arterial ulcers?

Dr. Monafo: Yes. I do not mean to imply that silver nitrate clears a plug in a vessel, but there are patients who have arterial ulcers that you cannot get to heal. They are ischemic ulcers that will heal if you can eliminate the staphylococci from them, and this is helpful. This is not a cure all, but it is effective, particularly so in venous ulcers. We have dressed infected amputation stumps with it frequently.

Dr. James L. Molchan: Where did this air pocket in the blanket come from? I did not quite understand that.

Dr. Monafo: When we put the dressings on, the patients would all complain bitterly that they were cold. It was obvious that the water was evaporating from the dressing. The patients would ask for covers, and the nurses would give them covers, lots of them. They usually have a sheet or two and then a cotton hospital blanket. We measured what was going on. This layer of warmer air around them was obviously trapped heat coming from the individual. I think this is a way of preventing the dissipation of heat into the ambient air. Therefore, that heat is present to help vaporize the water that is in that dressing. You are utilizing radiated heat from the patient more effectively, I think, if you keep him covered. Convection is minimized as mode of heat loss.

Mercy Hospital, Des Moines

Clinicopathologic Conference

Joseph Song, M.D., Pathologist: The case for today's discussion will be presented by Dr. Khasnabis. Dr. Khasnabis, will you read the protocol for us?

S. Khasnabis, M.D., Intern: This is a case of a 53-year-old white female who was admitted to Mercy Hospital on January 27, 1965, with a history of a mass in the right side of the neck. This mass had progressively enlarged for several weeks prior to admission. The patient had considerable difficulty in swallowing and breathing. The difficulty in swallowing had become so severe the past week that she had to force liquids with solid foods. Her past history was essentially negative. The family history revealed the mother of the patient died of carcinoma of the rectum, and her father died of heart disease of unknown nature. Review of systems revealed an increased nervousness for the past few years, and this was attributed to continuous difficulty in breathing and swallowing. There was definite progressive dysphagia. The shortness of breath was recorded for the past few weeks prior to admission. Despite an excellent appetite, the patient stated she had lost considerable weight during the two weeks prior to admission due to difficulty in swallowing. The patient had experienced menopause several years ago, after having two successful pregnancies.

Physical examination revealed a 53-year-old white female who was well-developed and well-nourished, showing no evidence of any great weight loss. Examination of the throat revealed a definite swelling on the right side of the neck in the region of the thyroid gland. There were several hard nodules on the lateral aspect of the left side of the neck slightly larger than pea size. Several nodules could be felt on the right side of the neck. All of the nodules appeared quite firm and hard in consistency, and the thyroid gland apparently was part of this mass which was readily palpated. There were several enlarged lymph nodes on both sides of the neck which were discreet, but there was no lymphadenopathy elsewhere. Examinations of the chest, abdomen, and extremities were all negative. External genitalia were of a normal female beyond the menopause. Neurologic examinations were negative. The hemoglobin concentration was 13.1 Gm. per cent, the hematocrit 40 per cent, and the red cell count was 4,330,000/cu. mm. Her white cell count was 5,700/cu. mm., and the differential smear revealed 71 per cent mature neutrophils, 24 per cent lymphocytes, 4 per cent monocytes, and 1 per cent eosinophils. The red blood all appeared normal, and the platelets were adequate in number and shape. Her urinalysis was within normal limits.

Dr. Song: Thank you, Dr. Khasnabis, for presenting this case this morning. Now I would like to ask Dr. Hines to discuss the radiologic findings on this patient.

Ralph E. Hines, M.D., Department of Radiology: X-ray examination on January 21, 1965 showed an area of partial obstruction of the esophagus with the barium being deviated to the left side below the area of the valleculae. We are unable to determine the reason for the partial obstruction; whether it is intrinsic or extrinsic cannot be determined from this study alone.

The x-ray study of the chest on January 25, 1965 showed a hypertensive configuration to the cardiac silhouette. Evidence of infiltration in either lung field is not seen. Lateral film shows osteoarthritic fringing of the dorsal bodies. No evidence of an acute inflammatory disease is seen.

On February 20, 1965 the esophagus study showed it more patent than on the previous examination. However, the cinefilm had not been developed, but we did not see evidence of obstruction at this time, such as was noted previously. The patient is much improved over the last examination.

X-ray therapy was exhibited to the neck area of this patient between January 25, 1965 and February 20, 1965 which accounts for the improvement in the esophagus. There were no radiographic findings in this case which contributed to a specific diagnosis of lymphosarcoma. The only diagnosis that could be established by x-ray was a mass in the thyroid area.

Dr. Song: Thank you, Dr. Hines, for your excellent discussion on the radiologic findings. I would like, at this time, to ask Dr. Clemens to comment, based on his surgical procedures on this case.

A. L. Clemens, M.D., Chief of Surgery: When I first saw this woman, she had a rapidly enlarging, hard, fixed mass of her neck, which extended laterally past the sternocleidal mastoid muscles with

marked enlargement of the lymph nodes on both sides. Surgically speaking, this gland was not able to be removed technically; however, I did decompress as much of the right lobe in the isthmus so as to increase her airway and relieve her obstructive symptoms on swallowing. A tracheotomy was done in order to assure an adequate airway while x-ray therapy was administered.

My feeling concerning this condition surgically is that this offers only a problem for diagnosis and relieving the obstruction and allowing an adequate airway so that further therapy may be carried out.

Dr. Song: Thank you, Dr. Clemens, for your comments. I would like to reserve Dr. Clemens' opinion as to what treatments would be the choice for later discussion. Are there any questions from the floor before we proceed for pathologic diagnosis?

A section was made of the thyroid tissue received from Dr. Clemens for frozen section, and the tissue was very firm, composed of several whitish gray nodules surrounded by normal looking thyroid tissue.

The tumor was composed of solid seeds of lymphocytes, lymphoblasts and reticulum cells. The normal thyroid tissue is obscured by the extensive replacement of the neoplastic cells, primarily composed of mature lymphocytes, and this we called lymphosarcoma of the thyroid gland.

I think it would be well to review the normal thyroid structures before we go any further. In an area of normal thyroid gland, we noted the thyroid tissues to be made up of multiple acini composed of single-layered columnar cells. The lumen was filled with the colloidal material. The thyroid gland, as we all know, has no ducts, so that the thyroxin produced by the thyroid gland will go on to the blood stream directly.

There are many variations of the normal thyroid structure. We could see the normal acini in one corner. There were occasional foci of lymphocytic elements which are now considered to be unremarkable existence being a part of normal thyroid structure.

The follicles were lined with a single layer of cuboidal epithelial cells in portions concerned with the production of thyroid hormone and with tall columnar epithelium in areas concerned with resorption of the hormone. The external surface of the cuboidal cells forming the follicles rested not upon a basement membrane but upon loose connective tissue which contained blood vessels, lymphatics, nerves, few lymphocytes which I have already mentioned, and scattered macrophages. Although it is known that thyroxin is manufactured by the epithelial cells, that iodine is a necessary prerequisite for its formation, and that it is stored in the alveoli in the form of colloid, the exact mechanism or mechanisms involved in its production are not clearly understood.

Time will not permit us to cover all the pathologic conditions involving the thyroid gland, so we shall select a few conditions that are commonly seen by clinicians and by pathologists. We considered the so-called Riedel's struma. The dominant feature of this disease is a diffuse fibrosis. In early cases, the fibrous tissue is quite cellular and is increased both interlobularly and intralobularly. Later it becomes hyaline and replaces most of the parenchyma. The acini gradually become smaller, and the colloid is rapidly absorbed. The epithelial cells of the acini are normal, tall columnar, low cuboidal, or degenerated. Frequently they are collected into small foci and may be mistaken for Langhan's giant cells. It should be pointed out, however, that true giant cells are also sometimes present. A diffuse infiltration with lymphocytes and definite lymph follicle formation is frequently encountered in early lesions. Plasma cell infiltration is always seen in varying degree.

Also considered was the so-called Hashimoto's disease which is sometimes referred to as struma lymphomatosa. It is largely confined to women around the age of 50 years. The chief complaint is gradual enlargement of the thyroid gland over a period of 15 months or longer. The capsule of the thyroid is well defined but not thickened in most cases. The outstanding histologic change is lymphoid infiltration, either in the form of single cells or well-defined follicles with active germinal centers. Sometimes the lymphoid tissue is moderate in amount, but at other times it almost completely replaces the entire parenchyma. A diagnosis of this disease is ordinarily made histologically, for there is nothing distinctive in the history of physical examination. But even a microscopic diagnosis may be confused with hyperthyroidism in which there is considerable lymphoid infiltration.

In the case of colloid goiter you may notice that the thyroid gland and acini are diffusely enlarged. Sometimes the acini are fused, being lined with cuboidal or flattened epithelium and filled with pale and thin colloid.

In a diffuse hyperplasia the histologic structure likewise varies according to the preoperative medication. In the absence of Lugol's solution or thiouracil, the acini are large, round or irregular, disclose papillary infoldings of the epithelium into the lumens, and contain varied amounts of pale-staining or watery colloid. Most of the lining cells are tall cuboidal, bulging into the lumen. The supporting stroma is a scanty vascular tissue containing a sprinkling or a dense infiltration with lymphocytes. Preoperative administration of thiouracil intensifies the hyperplastic pictures, whereas treatment with Lugol's solution eventuates involutionary changes; namely, there is a reaccumulation of abundant, vacuolated and eosinophilic colloid with concomitant disappearance of papillary projections

and a return of most of the epithelial cells to a flat, or low, cuboidal variety.

There are many other conditions that deserve brief mention, such as adenomatous goiter, follicular adenomas, fetal adenomas, etc. I hope that we will cover all these different varieties in the future. However, I would like to bring out several points in making a diagnosis of cancer of the thyroid based on microscopic features:

1. It has been described that the most important criterium is to find invading nests of acinal cells in the blood vessels or lymphatics.

2. Capsule invasion by proliferating acini has been regarded as a significant criterium for adenocarcinoma of the thyroid gland, but it has been reconsidered, based on the fact that the normal thyroid acini may be found in the capsule regions. The recent trends emphasize that the lymphatic invasion by acini with eventual lymph node metastases would be the most significant single criterium for adenocarcinoma of the thyroid. We shall discuss this in more detail in the future.

Now, getting back to this case, as I have already described to you, the thyroid gland is completely obscured by proliferating lymphoid cells, mostly of lymphocytic type, lymphoblasts and some reticulum cells. The reticulum stains fail to contribute for alternating diagnosis of reticulum cell sarcoma. Our final diagnosis is primary lymphosarcoma of lymphocytic type involving the thyroid glands of this 53-year-old white female.

PRIMARY LYMPHOSARCOMA OF THE THYROID GLAND

Primary lymphosarcoma of the thyroid gland is considered rare by most clinicians and pathologists; in fact, James Ewing, the father of modern tumor pathology, stated as late as 1940, that he doubted the existence of the entity; nevertheless, the entity is well documented in the literature. Graham, in 1931, stated that he observed a lymphosarcoma arising in a case of chronic lymphocytic thyroiditis. He was followed by Ade in 1941; Kellett and Sutherland in 1949 (five cases); Dinsmore, Dempsey and Hazard in 1949 (eight cases); Dick and Kellett in 1951 (two cases); Brewer and Orr in 1955 (eight cases); Kenyon and Ackerman in 1955 (two cases); Walt, Woolner and Blak in 1957 (eight cases), and Meissner and Philipps in 1961 and 1962 (five cases). In 1964 Herrick reported eight cases of primary malignant lymphoma of the thyroid with a review of literature, bringing a total of 84 reported cases. Herrick further stated that although there is no consensus as to the treatment of choice, resection—total, or subtotal, according to the extent of involvement—followed by roentgen irradiation, offers the patient his best chance of survival.

The patterns of lymphoid distribution in the thyroid gland have long been observed, not only in the presence of such pathologic entities as chronic thyroiditis, struma lymphomatosis, hyperplasia of the thyroid gland and Riedel's struma, but in the normal thyroid gland as well. Simmonds reported the presence of lymphoid tissue in 5 per cent of normal thyroid glands. It would seem likely then that primary malignant lymphoma of the thyroid gland can and does occur. In most cases of lymphosarcoma of the thyroid gland it reaches its termination quickly, indicating the prognosis of this disease is extremely poor.

The average age of the patient in the various series reported is 59.5 years. The principal symptom was sudden enlargement of the thyroid gland. Pressure symptoms ensued, with difficulty is swallowing and hoarseness. At operation the gland was frequently adherent to adjacent structures, particularly the trachea and the strap muscles. The gland was firm to hard, nodular and enlarged, and it often simulated Hashimoto's disease. In most cases, lymph nodes were not involved clinically or at operation.

According to Herrick, lymphosarcoma of the usual type occurring elsewhere in the body is more common in the male and occurs at a slightly earlier age. Four of Herrick's eight patients who were under treatment with cytoxin have died, although none of his patients showed gastrointestinal lesions. Many such cases are reported in the literature in which there were massive lymphomas in the small bowel or large bowel at autopsy. This is interesting in the light of the fact that malignant lymphomas of the gastrointestinal tract occasionally have a good prognosis.

PATHOLOGIC FEATURES OF LYMPHOSARCOMA OF THE THYROID GLAND

The thyroid gland is uniformly enlarged, being nodular and firm. The cut surface, characteristically, shows firm rubbery, homogeneous-flesh appearance. The review of the literature shows that malignant lymphoid tumors of all types have been reported, including most common malignant lymphomas, reticulum cell sarcomas, Hodgkin's disease, and plasmacytoma. Malignant lymphomas of the thyroid gland are most often confused microscopically with Hashimoto's disease, chronic thyroiditis, and small cell carcinoma of the thyroid gland. It is agreed by many authors that the primary malignant lymphoma of the thyroid follows identically the histologic pattern of generalized lymphoma. The lymphosarcoma showed sheets of small, dark uniform neoplastic cells resembling lymphocytes. Reticulum cell sarcoma, on the other hand, showed large paramorphic cells. More mitotic figures and bizarre nuclear forms are observed in reticulum cell sarcoma than in the cases of lymphosarcoma. Microscopically, the features separating chronic thyroiditis from lymphoma are: (1) areas of fibrosis, (2) normal-appearing lymphocytes, and (3) plasma cells. Necrosis and acute inflammation are not usually associated with malignant lymphoma of the thyroid. Vascular invasion

is observed with lymphoma as it is with carcinoma, although not as often. Metastases within the lymph nodes in a case of primary malignolymphoma of the thyroid appear identical with the microscopic picture of malignant lymphoma in the thyroid gland proper.

TREATMENT AND PROGNOSIS

The natural course of the disease cannot be determined from the series of cases alone, or any other small series, as the patients are too few to justify the drawing of conclusions. In most of the cases, death occurred within a few months. According to Walt, Woolner and Blak all of the patients within their series were dead within 18 months. Three of their patients in whom adjacent structures were invaded but who underwent operations with subsequent x-ray therapy, lived 32, 71, 83 months, respectively. This would indicate that even for patients with advanced disease, there still is value in surgical intervention and roentgen therapy. Regardless of the general tendency toward rapid tumor growth, an occasional patient has survived for many years, ranging from two years to 16 years, after treatment. Survival appears to depend to a greater extent on whether the patient is localized at the time of treatment, rather than on the cell type of tumor. The prognosis of lymphosarcoma of the thyroid gland simulates the prognosis of lymphoma of the gastrointestinal tract, in that there is usually a high mortality rate, but a minority of patients may survive for many years.

Dr. Song: Dr. Clemens, would you make an additional comment on the treatment?

Dr. Clemens: The treatment here was x-ray therapy; however, in view of the spread that had developed in the meantime; namely, that of the collapse of one of her lumbar vertebrae, I feel that both chemotherapy and x-ray therapy would now be the treatment of choice.

Dr. Song: Are there any more comments from the floor?

Dr. H. G. Ellis, Surgeon, Director of Medical Education: Could this be a primary lymphoma of the neck invading the thyroid gland?

Dr. Song: Yes, indeed. It is distinctly possible that this represents a primary lymphoma arising from the lymph nodes in the neck and invading the adjacent thyroid tissues. However, I must point out that the lymph nodes around the neck and the axilla were small and appeared to be negative, so it would favor the primary lymphosarcoma of the thyroid gland. But this is a very good question, and we should keep this in mind. Your point is well taken, Dr. Ellis.

Any other comments from the floor? If not, I would like to express my deep appreciation to Dr. Khasnabis, Dr. Hines, Dr. Ellis and Dr. Clemens. Thank you.

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Health Planning Council of Iowa

Three meetings of the Board of Directors of the Health Planning Council of Iowa have been held since May, 1965, and the organization is in the process of developing specific projects for implementation. The formation of the Council was spearheaded by the Iowa Medical Society, on direction of its House of Delegates.

The Council is a voluntary grass-roots organization of representatives from various professional, voluntary health, governmental, educational and business organizations. It was formed in the belief that adequate planning on a voluntary basis can play an important role in achieving economy through the more effective use and distribution of health facilities and services.

One of the most important functions of HPCI will be to stimulate the creation of regional planning councils which will be concerned with the development of suitable health facilities and services, and unnecessary duplication of facilities and services.

Members of the IMS should take an active interest in the activities of the Council. It is anticipated that reports of special significance and importance to the medical profession will be issued in the future through the pages of the JOURNAL.

Homer L. Skinner, M.D., of Carroll, representing the Iowa Medical Society, is President of HPCI. Other officers and members of the Board of Directors are: Donald Conroy, First Vice President, Iowa Hospital Association; Joseph B. Baker, D.O., Second Vice President, Iowa Society of Osteopathic Physicians and Surgeons; John C. Bartlett, Secretary, University of Iowa College of Medicine; A. R. Godwin, Treasurer, Iowa Nursing Home Association; Donald Happe, Associated Hospital Service, Inc.; L. J. Galinsky, M.D.; Greater Des Moines Health Facilities Planning Council; T. F. Vigorito, D.O., College of Osteopathic Medicine & Surgery; Kenneth Barrows, Health Insurance Council; F. W. Pillars, D.D.S., Iowa Dental Association; Mrs. J. S. Van Wert, Iowa Farm Bureau Federation; Harry L. Branscomb, Iowa Federation of Labor; C. V. Edwards, Sr., M.D., Iowa Medical Service; Fernando Duran, R.N., Iowa Nurses Association; A. M. Van Houweling, Iowa Pharmaceutical Association; Honorable Daryl H. Nims, Iowa State Senate; Mrs. Vera Herwe, Licensed Practical Nurses Association of Iowa; John H. Smith, M.D., Scott County Health Facilities Planning Council; J. O. Cromwell, M.D., State Board of Control; F. W. Pickworth, State Department of Health; E. M. Smith, M.D., State Department of Social Welfare.

Troublesome Problems in Office Gynecology

JOSEPH W. KELSO, M.D.
Oklahoma City, Oklahoma

In the practice of medicine in which we are engaged, whether as general practitioners or as specialists, the women we treat have similar as well as special problems. Each of us must treat pelvic disease to the best of our ability based on accepted therapeutic measures. And, of course, we find the most grateful patient is the one who has been cured, be it from pain, a vaginal discharge, or sexual incompatibility.

Not every woman who has a hysterectomy becomes a happy woman, but women cured through an office procedure will forever hold you in admiration. I want to share with you therapeutic measures which have been developed in my office over the past 35 years.

HISTORY

Be a good listener. Do not refuse to take the most detailed history the patient can give. Many patients have seen numerous other physicians, and they are frequently disgusted with the medical profession because of past management or mismanagement. The few minutes spent listening to their histories may reestablish their faith and prove to be the most profitable time you will spend with such patients. The errors of omission or commission of previous physicians may be obvious and, if known, may be helpful in planning the treatment.

Ask careful well-directed, probing questions to help you arrive at a correct diagnosis. This adequate evaluation of the patient's entire problem will enable you to institute proper therapy.

In a busy office with a volume of new patients, it is worthwhile to have a historian take the new patient to a quiet office where routine questions may be asked with the replies entered on the patient's chart. A good historian will sift through the extensive information given by the patient and will record the significant points for your quiet perusal before you see the patient. A good historian will also be able to establish rapport between herself and the patient with a few brief words, dispel at least some of her nervousness, and, through a list of carefully prepared routine questions, perhaps bring out valuable information which might have been forgotten by the patient. We have found a good historian to be well worth her salary. In addition to the preceding, we keep a complete, typewritten history of the patient, and this is a valuable office record. I might add that our examination is dictated in the presence of the patient to be typed later by the historian.

EXAMINATION

In our office, the patient's examination begins before we see her. She is directed by a nurse to a *prep* room where her weight, blood pressure, pulse, hemoglobin, and urinalysis (as well as her current complaints, if not a new patient) are recorded by the nurse. After the patient has removed her clothing, except for hose and shoes, and has donned a gown in a dressing room, she is draped by the nurse on the examining table.

Having read her chart, we make our examination, first of a general nature, followed by a pelvic and rectal examination. It is the rule rather than the exception that a complete physical and pelvic examination will reveal a separate or related disease in addition to the one for which the patient presents herself. I am constantly amazed how many women tell me they have never had a complete examination or, for that matter, have never had a urinalysis from a catheterized specimen. Remember, a voided specimen is of value only if it is totally negative.

A pelvic examination is always performed. It is surprising the number of women and, yes, of doctors, who believe a woman should not be examined when she is menstruating. I well remember one who had been refused a pelvic examination by her physician for two and a half years because she was flowing; her cancer grew unopposed to an advanced stage.

No pelvic examination is complete without a Papanicolaou smear with visualization of the cervix. The bimanual also adds invaluable information. Do not hesitate at this time in your examination to do a culdocentesis if an ectopic pregnancy is even suspected. We frequently save a urine specimen to be sent for a urine chorionic gonadotropin, if pregnancy is suspected.

Make your examination complete, useful, and

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diagnostic. With that accomplished, treatment can be instituted more intelligently.

SEXUAL INEQUALITIES

Frigidity, or sexual incompatibility, probably heads the list of troublesome problems I have to manage. Without patient listening and sympathetic understanding, you will not be successful in the management of this problem. It may require several visits before these worried women reveal the cause for consultation. They need our help and we must listen to their stories.

For the past 16 years, we have been observing the results of large doses of androgens given for the purpose of stimulating sexual response and desire in these troubled women, and we have had phenomenal success with this therapy. Grey-haired women have experienced their first compatible congress. Thirty-six couples have volunteered the information that this therapy prevented a visit to the divorce court. Mere houses have been changes into homes of happiness, and I have been repaid for my efforts by their gratitude.

We have used Upjohn's Depo-Testosterone and have arrived at a dosage of 150 mg. for the first injection. If compatibility has not occurred in one week, another 100 mg. is given. The patient is seen four weeks later; if improvement has not occurred, another 100 mg. is given. The treatment is then abandoned if no response has been achieved. I have had about 80 per cent overall satisfactory results. Side reactions are present and demand close observation and respect; in fact, they may even force one to terminate the therapy. The clitoris becomes hypertrophied in a large percentage of cases, but this is no reason for discontinuance of the drug. However, hirsutism and voice changes do occur to such an extent that one cannot conscientiously continue the injections. In addition to administration of the drug, the gynecologist must advise these women relative to alteration in technic and frequently must outline a plan for them to follow in preparation for and in execution of the sexual act. The art of copulation is unknown in many homes and such couples need your advice. Patients are eager and willing to listen to instruction and they are a rewarding experience.

ABNORMAL UTERINE BLEEDING

Abnormal uterine bleeding probably ranks next among troublesome problems. The scope of this review does not permit discussion of endocrine management of this syndrome, so I shall merely say that I believe the cases are rare in which we must resort to a hysterectomy under age 38.

Progestational or sequential agents leave almost outdated all other forms of medical management of abnormal uterine bleeding. I do not need to give their dosages as you are all familiar with these newer agents. Some women, of course, do not tolerate these drugs, so we must then return to the use of cyclic estrogens and progesterone. Cyclic estrogens and progesterone control many of these cases—Amnestrogen or Premarin, 1.25 mg. once or twice daily for 20 days, beginning on the fourth day of the period, with or without 50 mg. of progesterone on the sixteenth or twenty-fourth days of the cycle. Another reliable management is 10 mg. of Squibb's Delestrogen, intramuscular, on the first day of a cycle and 1 cc. of Deluteval on the fourteenth day of the cycle. Profuse bleeding (your patient will call it flooding) can frequently be satisfactorily managed by initially large doses of estrogens tapered off to an abrupt four days before she would normally expect a period: Premarin, 2.5 mg. every hour for four to eight doses or until profuse flow has stopped, gradually reducing the dosage over the next few days and ending with one tablet of 2.5 mg. daily until four days prior to the anticipated period. Thyroid is a valuable drug and is utilized for its therapeutic value. A protein-bound-iodine determination is obtained and, if low, the need for medication is indicated. I believe that a level below five is too low and I prescribe thyroid.

In refractory cases, a curettage is indicated and reindicated. It should be timed, if possible, to be done in the late secretory period. Valuable information as to ovulation can be obtained from the curetting which may alter the planned therapeutic attack.

DYSMENORRHEA

Dysmenorrhea is another frequently found problem. Often girls have gone from doctor to doctor, hunting relief from their agonizing cramps which last from a few hours to three or four days each menstrual period. An acquired case can often be explained by existing pathology, such as endometriosis, adenomyosis, submucous fibroid, or other existing adnexal pathology. The primary type of dysmenorrhea will very often defeat the therapeutic ingenuity of the most seasoned gynecologist. As you know, I am a clinician and not a psychiatrist, and I have not been able to convince myself that these girls are demonstrating their resentment at not having been born men. I have not been indoctrinated in the belief that many girls use dysmenorrhea as an excuse to miss school or work or that they may be permanently cured by being emancipated from their mothers. I firmly believe that most of them are in pain and that, just because most of us are men, we have no right to deny them our best efforts toward their relief.

My regime in these cases is to discuss the problem and to advise that the cause is unknown but that the *trial and error* method will be used until our armamentarium has been exhausted. The first step toward relief is the use of a product called neo Bromth; these tablets are taken three times daily for six days prior to onset of anticipated period. This medications is used chiefly for

the symptoms to which I shall refer later in the premenstrual tension group, but the results in dysmenorrhea are often gratifying. In addition, I use Vasodilan, two tablets four times daily, starting two days prior to the expected period and continuing for three days after onset of flow; or two Bellergal tablets three times daily for the same calculated portion of the cycle. If no relief is obtained, I prescribe 5 mg. linguettes of androgens three times daily for eight days, beginning eight days after onset of a period. If this fails, I try the same dose for 12 days preceding the period, always taking advantage of Bellergal just before and during the period. If no relief is obtained, one should resort to progestational agents—Enovid, or one of your choice—to prevent ovulation. Once a satisfactory regime has been found, it will usually allow painless bleeding and can be continued for many months. We all know that ovulation is not always inhibited by progestational agents, so relief may not always be obtained. Amnestrogen or Premarin, 7.5 mg., taken for 20 days, starting the fourth day of the period, likewise may not always prevent ovulation but they present a good second-choice agent. If pain returns at a subsequent period after drugs have been discontinued, I subject the patient to a presacral neurectomy, which procedure has been at least 95 per cent effective, and the patient is forever grateful. I do not wish to imply that I am a psychological nihilist, because I do take advantage of such an approach. I sincerely believe, however, that these patients are most frequently in pain.

VAGINITIS

Vaginitis cases have increased in my office the past several years. Trichomoniasis has possibly increased and still retains a prominent place in my list of refractory cases. The patient with a hanging drop positive for Trichomonas and with a sweetish, pungent odor to her discharge can now be cured in at least 95 per cent of the cases by giving her 250 mg. of Flagyl three times daily for 10 days and the sexual partner the same drug twice daily for 10 days. I have seen this disease in small girls and in virginal women, and I know it is not always the result of sexual transmission. I also have the patient use one of the many vaginal suppositories nightly while she is under management. All patients treated for trichomoniasis are re-evaluated at the end of three weeks; if the hanging drop is negative, they are probably cured, but we do a hanging drop four weeks later for confirmation. Should this treatment fail, I prescribe a second course of Flagyl and return to a rigid regime with one of the many vaginal suppositories such as Baculin, Trimagill, Carbasone, etc. Douches are limited to as few as possible—preferably none. The efficiency of vaginal treatment probably depends upon a high acidity of the vagina obtained from medication, and douching may prevent this achievement. I have found little difference in the various types of douches as long as their pH is 4.5 or lower. Sanicide has been successfully used by many of my patients. I am never argumentative when one of my refractory patients offers me some logical suggestions, as some persistent trichomonal infections will test the ingenuity of the most seasoned gynecologist, if they cannot be controlled by Flagyl.

Moniliasis or yeast vaginitis, with its almost universally accompanying pruritis, has increased in frequency to almost alarming proportions. There is no question the use of every one of the *mycin* drugs may be followed by this annoying complication in about 15 to 20 per cent of the cases. Some antibiotics produce this complication more frequently than do others but all can be convicted. Penicillin, although rarely, has been in our experience one of the culprits. I have seen moniliasis in all stages from mild to disabling, so I hesitate to prescribe the *mycin* drugs for over two or three days in succession, except for specific indications and with the use of Mycostatin suppositories prophylactically.

I have seen numerous cases of moniliasis several years after surgery, at which time *mycin* therapy had been used—women who had itched night and day during this time but who were relieved 24 hours after treatment had been instituted. The hanging drop identifies single yeast buds or yeast rods and establishes a diagnosis; it is the only test needed. However, women use douches generously and one should not take a defeatist attitude if the moniliasis cannot be demonstrated; simply allow the hanging drop to stand at room temperature overnight, and when you examine a drop from the specimen the next day, you will find your suspicion was valid. Nickerson cultures are invaluable in questionable cases; they are easily obtained in the office.

Treatment of moniliasis has been somewhat revolutionized since the advent of Mycostatin vaginal tablets; they afford the highest percentage of cures of anything I have used. My patients are asked to insert one Mycostatin vaginal tablet twice daily for 10 days, then one daily for 10 days; they then are asked to return to see me in four weeks. Again douches are forbidden or kept to a bare minimum. If on her return visit the patient's hanging drop is negative, she will use one tablet nightly for three days, then one every other night for two weeks, and then twice weekly for three weeks. She is advised to return in six weeks. This therapy should be continued throughout her first menstrual period. In cases not responding to Mycostatin or allergic to the medication, I use Sporostacin, one-half applicator full twice daily for one week and then nightly. Sporostacin cream should be used locally as needed for itching.

Before Mycostatin, my preferential treatment was Propion Gel, one-half applicator twice daily for 10 days and then once daily until the contents of the tube of medication were exhausted; the

patient then returns to the office one week later. This preparation will eradicate some of the Mycostatin-refractory cases. I have almost abandoned the use of Gentian Violet because of its frequent production of a chemical vaginitis which precludes an active attack on moniliasis. Experience has proved to me that it should be held for cases where other treatments have failed to alleviate the symptoms or cure the condition.

VULVITIS

Vulvitis cases merit attention because patients are miserable and soon become exhausted. For practical purposes, these cases resolve into those from contact disturbance or from infection associated with vaginitis. If from monilia, the management of vulvitis is only part of the overall treatment. Mycolog cream is to be used locally and sparingly four to six times daily as long as needed to control the itching. Vulvitis originating from trichomoniasis usually needs no added treatment but, if so, use a cortisone cream or an antihistamine ointment.

Contact vulvitis is often not quite so readily conquered, but its management consists of the following:

1. Change soaps; use Duke's Basic or Ivory.
2. Discard rayon and nylon underwear and nightwear; substitute cotton or pure silk.
3. Use Pyribenzamine or some anti-histamine ointment.
4. Take starch sitz-baths or use warm packs of starch.
5. Wear cotton gloves at night if itching is intense.
6. Use sedation to allow patient some rest.
7. Give adequate intramuscular estrogens to older patient or prematurely aging woman.
8. Use Depo-Medrol in persistent cases.

Senile vaginitis needs a word about its management. Nothing in gynecology can equal the improvement resulting in these thin-lined, cracking vaginas which bleed on the least manipulation. They are treated with Dienestrol or Premarin hormone cream, using one-fourth of an applicator every other day for one week, then every third day for one week, and then weekly indefinitely. If this condition is associated with an atrophic condition of the vulva, the patient is encouraged to use sparingly the same medication locally once or twice daily. The results are phenomenal.

ENDOCERVICITIS

Endocervicitis is the etiological factor in many cases of vaginal discharge. I coagulate the ectropion and do electric conization for the true endocervical infections. No one can convince me that one can cure an infection which is harbored one or two centimeters within the external os of the cervix by cauterizing superficially. I do this procedure in my office without anesthesia, but to do it successfully one must have a very high-frequency blended current machine which will cut and coagulate at the same time. I am not bothered with stenosis; I attribute this to the fact that we pack the cervix with oxycel at the time of and following the conization. Bleeding has never necessitated the sacrifice of a uterus. These women are relieved of their constant discharge, their pelvic cellulitis disappears, and they are free of pelvic pain and sensitiveness. They are grateful patients.

MENOPAUSE

I shall pass hurriedly over the menopause, not because these cases present less troublesome problems but because, if you do not believe they need estrogens, I shall not be able to change your mind. If you think that your wife, your mother, and 70 per cent of all women are allergic to you or to their environment, then my recommendations will be of no value to you.

I give estrogens in liberal doses. I find a definite percentage of women who apparently obtain inadequate relief from oral estrogens but who can be made absolutely comfortable on intramuscular estrogens. If I relieve these women psychologically by hypodermic needle, I am satisfied; I am then just as good as the psychiatrist and quite a bit cheaper! I just cannot believe that every woman wants to be ill.

ESTROGEN BLEEDING

Patients will vary from mere spotting to serious bleeding following the use of estrogens for menopausal symptoms, but do not allow yourself to believe that such bleeding is always because of estrogen or even that bleeding will always follow estrogen therapy. In the event of such bleeding, a curettage is mandatory! However, that is no reason to avoid use of estrogens to keep these people comfortable; resume the estrogen therapy after the curettage but with the patient's understanding that, if spotting or bleeding occurs again, she will have to be curetted again or have a hysterectomy.

ANDROGEN THERAPY

I am not as bold in the use of androgens for the control of vasomotor symptoms as are some of my associates, but I do use them. I resort, likewise, to the combined estrogens and androgens and frequently find them most effective in otherwise refractory cases. Do not forget androgens but do not be misled into thinking the undesirable side effects are tolerated well by all patients, because some of these effects are not merely transitory. I have a young woman patient who threatened to file suit for malpractice because of permanent voice change on less than 100 mg. of methyltestosterone. I have had several cases which have developed alarming edema of the extremities on less than 100 mg. of methyltestosterone, one of which began after only 15 mg. Not infrequently a pa-

tient tells me that she has grown a mustache since she began dissolving the prescribed tablets in her cheek.

I should like to warn against prolonged use of androgens without continuous follow-up visits. At the follow-up visits you should inquire if the patient has had a cold, because a *cold* is usually the patient's interpretation of her hoarseness. She may forget to mention it unless she is asked. Without this knowledge another 30 day course of treatment may cause permanent vocal changes.

PREMENSTRUAL TENSION

A state of nervous tension during the week, or even two weeks, preceding the menstrual period, disappearing at the onset of flow, is frequent in enough women to have been designated by us as the "premenstrual tension" syndrome. The bleeding phase of the menstrual cycle appears unannounced in very few women. It has been estimated that 40 per cent of women experience this tension period with severe enough symptoms to seek medical advice. If it were not for the fact that many women assume that this premenstrual tension is natural, a much higher percentage would undoubtedly come to us for counsel. Usually nervousness and depression are the predominant symptoms associated with irritability, insomnia, bloating sensation in pelvis, breast sensitiveness, headache, backache, thirst, and a general state of antisocial behavior.

There is probably an abnormal storage of water in the body tissue at this time, the cause of which is not fully understood but which may be due to some hormonal influence on the anterior or posterior pituitary lobes of the pituitary gland. neo Bromth, a product of the Brayten Pharmaceutical Company of Chattanooga, has been used with a high percentage of relief. It is being used repeatedly by literally hundreds of women from my practice. The dosage is two tablets three times daily for one week prior to onset of anticipated period or earlier if symptoms occur at an earlier hour. If good results are obtained, it is then repeated indefinitely, reducing the dose to two tablets two times daily over an equal space of time.

Squibb's Delalutin, 125 mg., given at the onset of this tension period will give relief to some, but it too frequently alters their cyclic regularity. If adequate relief is not obtained, we again find valuable use for the progestational agents, and they should be tried because they are often most effective.

There are cases necessitating a mild sedative, and I have used Bellergal tablets three or four times daily, stopping them at the onset of the menstrual flow. Some of these patients become desperate during these days of tension and occasionally advance to disability and even suicide.

Diuril or Cyclex daily during this period frequently satisfactorily reduces the symptoms through their diuretic action. Pre-Mens are likewise recommended. Regardless of the multiplicity of factors which may be complicating the patient's normalcy during these few days, she will be forever grateful to you for the relief given her disturbed body.

HEADACHES

Headaches are "headaches," but the gynecologist should have great respect for the headache patient. I hope that you have had a headache; unless you have, you cannot be sufficiently sympathetic to realize the problem. A headache is one of the most constant symptoms of estrogenic deficiency and can be relieved by liberal administration of estrogens. I believe it is almost as constant a symptom as the vasomotor disturbance described as "hot and cold spells." But it is one which causes a vascular dilation or spasm of the cerebral vessels, or whatever the mechanism may be which produces the headache. Premenstrual tension is almost always accompanied by headaches which can be averted by the use of the therapy outlined for the tension state. Bellergal is a most specific for headache, and I suggest its use.

The lives our girls live today provide a fertile field for tension headache, and it falls our lot to counsel them relative to these headaches. Discuss with them their family problems; help them organize their activities, possibly by reducing their church or social activities, and make every effort to alter the *social combat* which occurs in so many lives. I happen to believe that men and women should not work so hard or play so hard today that they need sedation or *tranquilizers* to permit them to work as hard or play as hard tomorrow. Some cases will need sedation, of course, but this should be for a relatively short span of time. It is at this point that I wish I had knowledge of hypnotism, but, even so, I believe that, through our patient-doctor relationship, we have a potent possibility of relieving their complicated volitional and psychological components. The 1966 *hip-hop-and-jump* social pattern leads one to predict that our patients will need our guidance more and more. No doubt the lives they are living do have a great deal to do with precipitating their headaches, but I cannot wholly agree with my psychosomatic associates who say "cutting the apron strings" which bind a girl to her mother will cure the headache she has today. A little codeine and aspirin have harmed but few and have helped many.

GONORRHEA AND SYPHILIS

Do not think that gonorrhea is a forgotten entity. In 1965 in our county, 306 cases were reported, which probably means that there were 3,000 cases. Only a few weeks ago, gonorrhea ran rampant through a family of four little girls, everyone developing a vulvovaginitis, the baby's condition being complicated with an ophthalmia. Of course, Penicillin will reduce your troubles

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"Doctor, when the kids act up and nothing goes right, I get these throbbing pains in the back of my head."

a new formulation that relieves pain in tension headache and neuralgia

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Contraindications: Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathamimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextra-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychaneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextra-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libida, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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with these cases, but permit me to warn you not to rely on one single injection.

Syphilis is also occurring more frequently again, and it warrants suspicion as well as adequate therapy, if a positive diagnosis has been made.

MISCELLANEOUS

To those of you who have the misfortune of accepting the care of patients who have had deep x-ray therapy, allow me to pass on an interesting therapeutic tool for the management of the frequent gastrointestinal side-effect of their treatment. The constant diarrhea, cramping, nausea, and vomiting are abolished by the intramuscular injection of Acthar Gel in doses of 80 units daily for three or four days, followed by Depo-Medrol or injectible Kenalog to give time for the tissues to return to a more normal state. If you have not observed the miraculous change which this management offers, you will be gratified the first time it is utilized.

Keloids are troublesome problems. The thickened, elevated scar with the annoying itching and stinging has been a symptom which has been hard for me to explain. Localized x-ray treatment has given relief in some cases, but it seems there is reluctance in prescribing it for a suprapubic scar. Kenalog ointment used sparingly two or three times daily has altered the undesirable appearance, has softened the scar, and has relieved patients of burning and itching. The percentage of improvement is very high and extremely gratifying.

COMMENTS

In closing, permit me a word of warning to the younger man concerning the necessity of having an attendant present at every examination. We all know that there are women who make it a business to prey on the doctor by accusing him falsely of attacking them while in his office. Information from a leading law enforcement officer reveals that, in one major county in Oklahoma in one year, complaints of criminal charges were offered for filing against 12 different doctors. Fortunately, investigation by the officer led him to the conclusion in each case that there was no basis for the legal action sought by the husbands for alleged attacks upon their wives, supposedly perpetrated while they were under anesthesia or the influence of drugs during the course of the doctor's examination.

Moralization concerning individual conduct comes under the heading of none of our business, but these 12 women, who had voluntarily philandered and found their extra-marital pregnancies difficult to explain to their husbands, were trying to protect their marriages by accusing their doctors of forcing an immoral relationship while at their offices for professional care. The 12 doctors, innocent as newborn babes, were blackmailed by threat of legal action which, no matter how determined by the courts, would have ruined them forever.

CONCLUSION

I have quickly outlined my management of some of the most troublesome gynecological problems. Those considered are, in my opinion, of great significance. Many more could be discussed. However, if we, as the patients' doctors, will listen closely they will alert us to the correct diagnosis in most cases. Granted that all cases cannot be pigeon-holed as this outline may seem to imply. If we interrogate the patient wisely relative to her symptoms and previous treatments, take advantage of previous mistakes, and keep in mind the multiple allergic possibilities which can occur, we shall not only accomplish much for ourselves but also perform memorable service for those who turn to us. Do not be afraid to admit that a patient's problems may necessitate some *trial and error* methods. A frank discussion of her problems will help you gain her cooperation and will aid you in the face of apparent failure until you can restore her to a state of health and happiness.

Fair's 'HALL OF HEALTH'

Between 50,000 and 75,000 persons are estimated to have visited the "Hall of Health" at the 1966 Iowa State Fair from August 19 to 28. The 1966 expanded "Hall of Health" project was spearheaded by the Iowa Interprofessional Association in cooperation with the State Department of Health and the Iowa State Fair Board.

Situated on the lower level of the Grandstand Building, the "Hall" included exhibits sponsored by the Iowa Medical Society, the Iowa Medical Foundation, the Iowa Veterinary Medical Association, the Iowa Pharmaceutical Association, the Iowa Dental Association, the Iowa Nurses Association and the Iowa Hospital Association. Also the State Department of Health, the State Services for Crippled Children, the Health Occupations Assistance Project and several others.

Additional educational displays were made available by pharmaceutical manufacturers Eli Lilly & Company, Smith Kline and French Laboratories, CIBA, and Diamond Laboratories.

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Polyarteritis Nodosa in a Four-Month-Old Infant

Case Report, With Autopsy Findings

WALTER M. BLOCK, M.D., and
FRANCIS M. SKOPEC, M.D.
Cedar Rapids

We have two reasons for presenting this case. First, information concerning a disease which is rarely diagnosed *in vivo* may prove useful. Second, only 21 cases of polyarteritis nodosa in infants under one year of age have been reported in the literature.

CASE REPORT

J.A., a white male infant four months of age had had an uneventful birth history. His birth weight had been 3,450 Gm. There were histories of congenital anomalies on both sides of his family. His parents' first-born child had a hydrocephalus and a meningocele, and had expired when two months old.

J.A. had been well until the age of two months. Then he had boils which were treated with penicillin.

When he reached 3½ months of age, he developed bronchitis which was treated with Pan-Alba®. After four days, when no improvement had been noted, he was hospitalized in his home town. A temperature of 103°F. was recorded rectally; rales were heard in the right lung; the sclerae were markedly injected; and there was a red macular rash on the upper extremities and the buttocks. A leukocyte count was 9,750/cu. mm.

X-ray examination of the chest revealed an infiltration in the right hilar region. On the following day he became markedly irritable, and whenever handled he uttered a piercing cry. The attending physician then made a significant entry on the patient's chart: "It is my opinion that the infant's rash, injected sclerae, muscle and joint sensitivity, and discomfort are secondary to a drug or food sensitivity. The picture resembles that of serum sickness as observed in adults. Because the infant was gradually getting weaker, I felt that cortisone therapy was indicated for the allergic phenomena. Within 24 hours there was tremendous improvement in the patient's condition. The sclerae had cleared, behavior was normal, the fever had subsided, stools were normal, and the rash had disappeared."

A week later, however, the infant took a turn for the worse, again showing marked irritability, and he therefore was transferred to St. Luke's Hospital, Cedar Rapids. Examination on admission revealed a fussy and very irritable baby who cried loudly when touched. His temperature was 102.6°F., rectally. A morbilliform rash was present on the extremities. The neck was limber, and the fontanelle was flat. There was mucoid material in the nose. The ears and throat showed nothing remarkable. The sclerae were moderately injected. The heart tones sounded normal, the rate and rhythm were regular, and there were no murmurs. Auscultation of the lungs revealed a few scattered rhonchi. The abdomen was soft and non-tender, and the liver and spleen were not enlarged. The extremities and joints showed nothing unusual. The reflexes were physiologic.

Laboratory Data: A urinalysis was negative for sugar, albumin, red blood cells and casts, but showed 20-25 white blood cells per high-power field. The hemoglobin was 9.0 Gm./100 ml.; the hematocrit was 31 per cent; and the leukocyte count was 24,650/cu. mm., with a normal differential. The cerebrospinal fluid contained 18 white cells (6 granulocytes and 12 lymphocytes); the protein content was 33 mg. per cent; the sugar was 47 mg. per cent; and a culture of the fluid was negative. Serum electrolytes were: sodium 140, potassium 6.5, calcium 4.65 and chlorides 102

From the Department of Pediatrics, St. Luke's Hospital (Dr. Block) and the Department of Pathology, Mercy Hospital (Dr. Skopec), Cedar Rapids. The authors acknowledge indebtedness to Dr. Donald J. Ottilie, of Oelwein, for referring the patient, and to Dr. Lewis E. January, a professor of medicine at the U. of I. College of Medicine, for interpreting the electrocardiogram.

mEq./L. The phosphorus was 6.6 and the blood urea nitrogen was 6.5 mg. per cent.

X-ray Studies: On the day of admission, roentgenographic examination of the chest showed a small area of increased density beneath the anterior end of the right third rib. There was a small amount of pleural thickening in the right cardiophrenic region. The heart was normal in size and shape (Figure 1).

For the first four days after admission, the patient's temperature fluctuated quite consistently between 102° and 103°F., rectally. There was some coughing. A red, morbilliform, macular and partially blotchy rash alternately appeared and disappeared on various parts of his body. The infant was treated with a tetracycline preparation because of the x-ray findings in the lung. On the fifth hospital day, he became acutely ill, dyspneic, lethargic, and pale, though dusky at times, and the cardiac rate jumped to 196/min. The respiratory rate was 76/min. A rough, systolic, Grade III murmur could then be heard over the entire precordium.

Electrocardiogram: An electrocardiogram was reported as follows: "Right axis deviation (100); P-R interval estimated at 0.12; QRS interval 0.06; atrial and ventricular rate 187; no ectopic beats. P-wave largely buried in T; QRS complex—predominantly R waves in V 1-2 and R/S deflection V 3-6. RS-T segment within normal limits. T-wave within normal limits. Mechanism—sinus tachycardia with an imperfectly defined A-V delay."

The interpretation was as follows: "This tracing is within normal range for this age, except for the tachycardia and A-V delay. There is no evidence whatever for myocardial infarction."

An x-ray examination of the chest at that time was interpreted as follows: "Since the previous examination five days ago, there has been a marked increase in the size of the heart, and it now occupies a large portion of the left chest. There is blunting of the cardiophrenic angles on the right. The pneumonitis previously noted can no longer be clearly visualized, and the lung fields appear moderately emphysematous" (Figure 2).

During the following night, the infant passed 12 very loose stools. He was put into an oxygen tent, he was digitalized, and Hydrocortone, 10 mg. was given him every eight hours. The steroid was administered because of the rather remarkable improvement that had occurred after such therapy during his previous hospitalization. Twenty-four hours after steroids were started, the rash had disappeared, the stools were normal, the temperature was normal, the cardiac rate had decreased to 122/min., and there was no murmur, but the respiratory rate was still 80/min. The infant's general condition appeared rather dramatically improved.

Two days later, the youngster became febrile again, his heart murmur was noticeable once more, and edema of the eyelids had developed. After another two days, he died rather suddenly. Shortly before death, several laboratory findings were

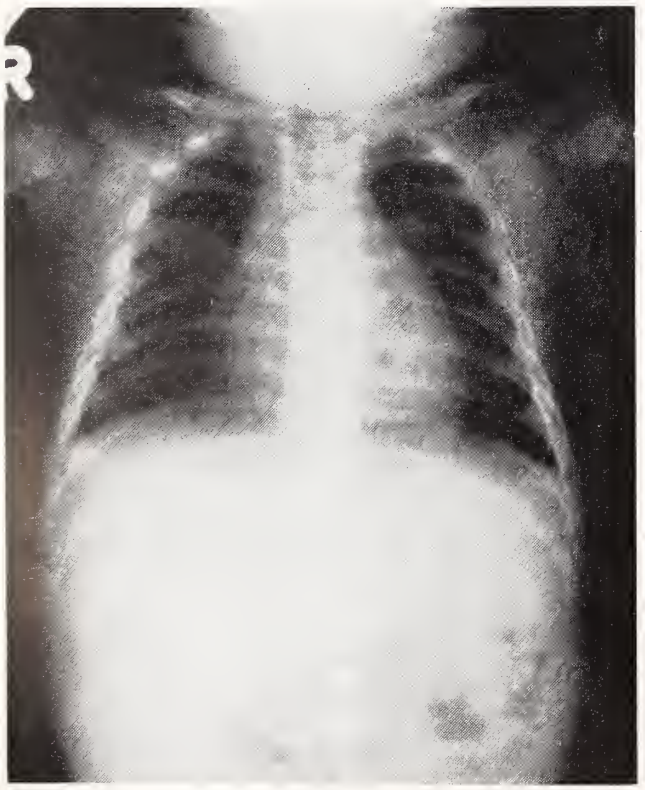

Figure 1. X-ray film of chest, showing normal-sized heart and small area of pneumonitis, right.

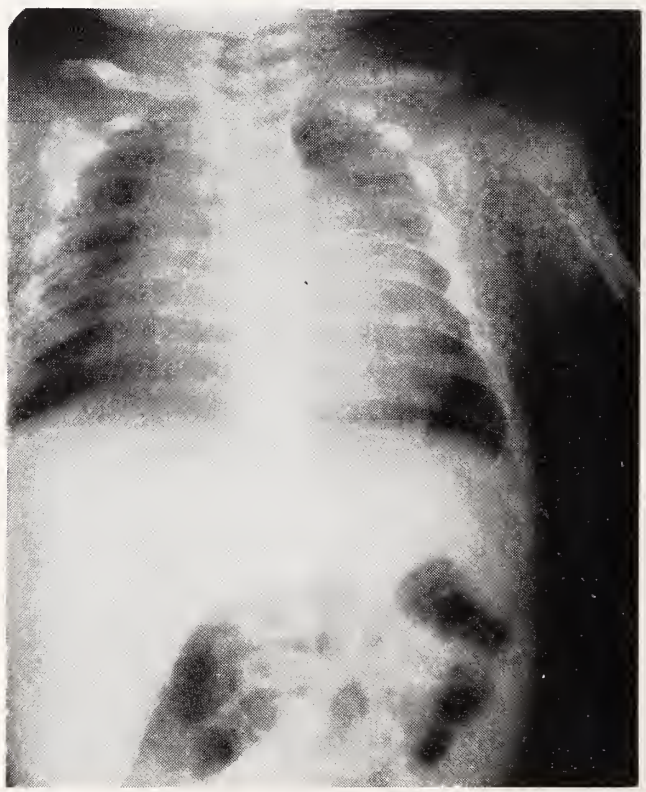

Figure 2. X-ray film of chest taken four days after first film, showing tremendous enlargement of heart.

obtained. The hemoglobin was 8.2 Gm./100 ml.; the leukocyte count was 45,700/cu. mm., with 84 per cent granulocytes and 16 per cent lymphocytes; the sedimentation rate was 80 mm./hr.; and the SGOT measured 73 units.

AUTOPSY FINDINGS

Examination of the surface of the patient's body revealed no lesions. His development was average for his stated age. The pericardial sac was dilated by pale, yellow fluid containing fine fragments of gray fibrin, and there were small, shaggy deposits of fibrin on the surface of the heart. The parietal pericardial sac bulged, almost touching the lateral chest walls. Although the ostia of the coronary arteries were small, each coronary artery, several millimeters from the ostium, became tremendously dilated and somewhat tortuous (Figure 3). The coronary arteries measured up to 14 mm. in diameter, and were filled with friable, reddish gray thrombi. No gross lesions were noted in the myocardium, and the endocardium was smooth. There were small foci of atelectasis in the lungs. In the left kidney, at the inferior pole, was an ischemic infarct one centimeter in greatest diameter.

Microscopically, the walls of the coronary arteries (Figure 4) and the medium- and small-sized arteries in the kidneys, mesentery and mediastinum and periadrenal fat were eccentrically thickened and infiltrated by a pleomorphic inflammatory process (Figure 5). The walls were edematous, and in many areas there were proliferations of fibroblasts. Some of the arteries were occluded by thrombi. All layers of the aterial walls had been invaded by the inflammatory process (Figure 6). No arterial lesions were seen in other organs. There was also a partially organized perisplenitis.

Figure 3. Gross view of heart, demonstrating normal-sized coronary ostium. Tremendously dilated and tortuous coronary arteries are seen cross-sectioned and filled with thrombi.

DISCUSSION

Rich[1] showed by rabbit studies in 1942 that a hypersensitivity reaction will produce lesions resembling periarteritis nodosa in animals. Other reports in the literature cite allergic reactions to drugs, particularly the sulfonamides and penicillin, as likely causes of the disease. Prior to his final illness, our patient had received penicillin for the treatment of boils.

Munro-Faure[2] and Savage and Smith[3] recently wrote extensive reviews of the literature. When we compared our patient with the case reports published by those authors, it became apparent that in spite of the multiplicity of symptoms, a fairly distinct, though complex, pattern evolves. Several findings, when properly investigated, may lead the observer to a correct diagnosis *in vivo*. These are the combination of otherwise unex-

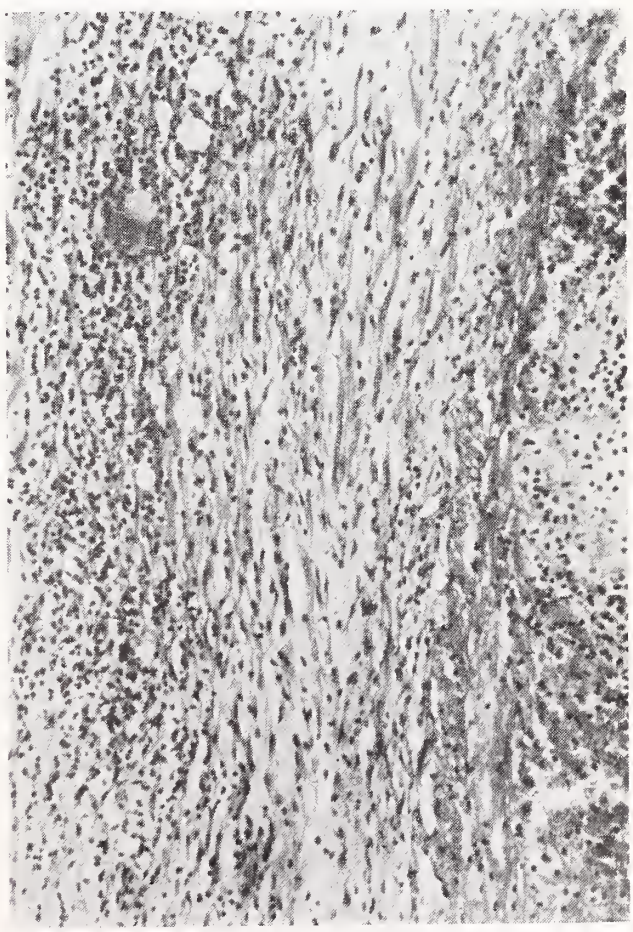

Figure 4. High-power view of wall of coronary artery, showing thickening, edema and pleomorphic inflammatory reaction in the wall.

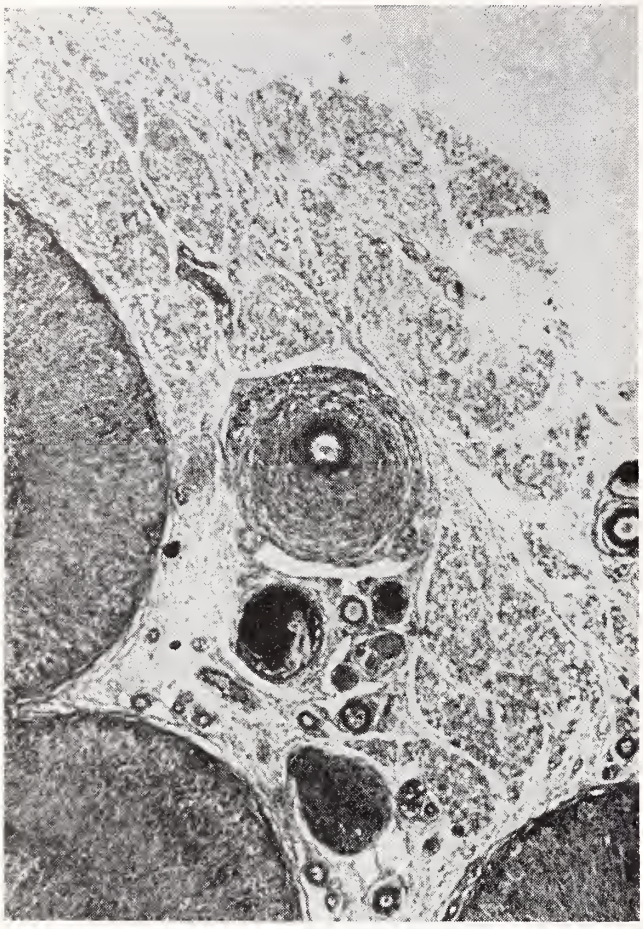

Figure 5. Low-power view of adrenal with an involved arteriole in the adjacent tissues. The eccentric thickening of the vessel wall is evident.

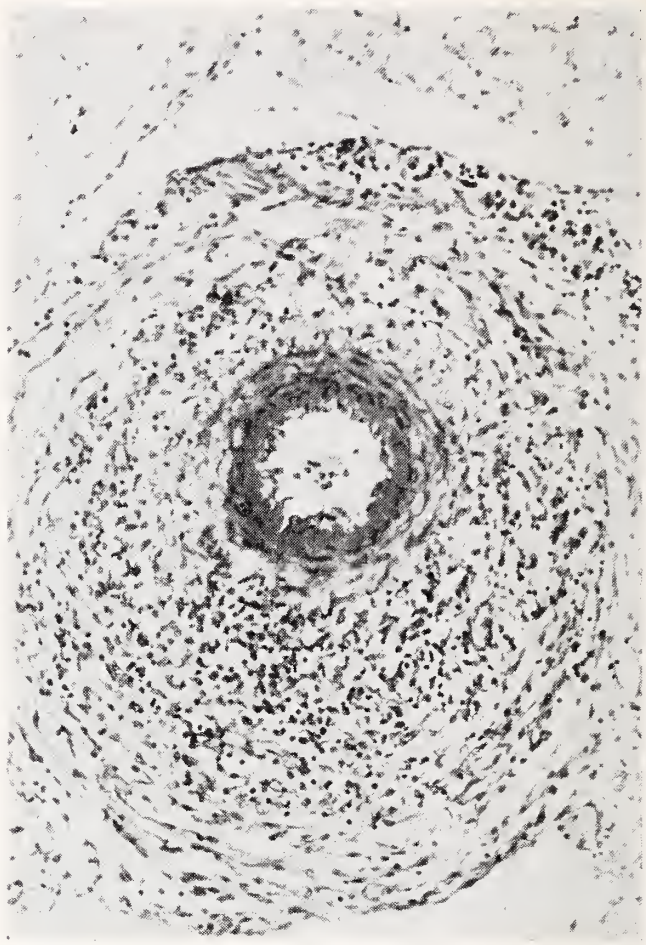

Figure 6. Medium-power view of thickened arterial wall, with inflammatory reaction.

plained fever, tachycardia, an evanescent morbilliform or urticarial eruption, marked leukocytosis of 20,000/cu. mm. or more, an acute respiratory disease, and possibly urinary and/or intestinal bleeding. If one is fortunate enough to find subcutaneous nodules, biopsy may reveal the diagnosis.

The symptoms of which an older child may complain generally relate to arterial occlusion. Abdominal pain that is reported in 50 per cent, and rheumatic pain reported in 52 per cent of cases may result from occlusion of small-mesentery or muscle arteries, respectively. The percentages are those quoted by Keith[4] in a paper published in 1941.

As with most poorly understood syndromes, various attempts at classification have been made. Harbitz[5] distinguished six groups according to predominant sites of lesions: gastrointestinal, renal, neuromuscular, cardiac, cerebral, and a form with pronounced skin changes. Such categorizing may help the physician to remember the commonest sites of pathologic involvement, but doubt is cast upon its validity by the frequent simultaneous occurrences of symptoms and findings in those areas.

Based on a review of 108 cases, Gruber[6] found that 74 per cent showed renal involvement in the form of hemorrhagic nephritis. Since the classic version of acute glomerular nephritis is a relatively common disorder in children, it may be well to think of periarteritis nodosa if atypical features occur in a child with hemorrhagic nephritis.

Roberts and Fetterman[8] reported, in 1963, on polyarteritis nodosa in a seven-month-old boy and a five-week-old girl. Besides analyzing the clinical features of those two patients, they reviewed the 18 cases previously reported in the literature.

In an extensive review of the disease written 30 years ago, Rothstein[7] aptly summarized the confused clinical picture as follows: "Periarteritis nodosa should always be considered in an instance of acute or chronic sepsis with negative blood cultures and bizarre symptomatology, especially when severe anemia, a febrile course, gastrointestinal symptoms, joint manifestations, skin eruptions, or signs of renal involvement are present."

As can be seen from the autopsy report, the most dramatic changes in our patient occurred in the coronary arteries. It seems logical to assume that the final coronary occlusion took place on the day the infant developed sudden tachycardia, dyspnea and a shock-like state. However, the electrocardiogram that was obtained that same day failed to show any significant abnormalities.

From a perusal of the literature, it becomes apparent that periarteritis nodosa is the commonest cause of coronary thrombosis in infants.

SUMMARY

A four-month-old infant with fever, marked irritability, varying skin eruptions and respiratory infection developed sudden tachycardia, dyspnea and a shock-like state. Treatment with cortisone resulted in rather dramatic although only temporary improvement.

Autopsy revealed severe coronary thrombosis and other vascular changes characteristic of polyarteritis nodosa.

The symptomatology of this disease may be quite varied, making the diagnosis very difficult. Symptoms and findings should be related to the possible sites of vascular occlusion in various organs, especially the heart, kidneys and gastrointestinal tract.

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AMA Clinical Convention

The scientific program for the 20th Clinical Convention of the American Medical Association has been described as especially for the physician in private practice. The four-day meeting will be in Las Vegas, Nevada, from November 27 to 30. Scientific sessions on 18 major topics are on the agenda as are three postgraduate courses, breakfast roundtable conferences, closed-circuit television and medical motion picture programs.

The three postgraduate courses will consider: Obstetrics and Gynecology, Fluid and Electrolyte Balance, and Cardiovascular Disease. Each course will consist of three half-day sessions, each of which will feature several outstanding teachers. There will be a $10 registration fee for each course.

Topics at the four Breakfast Roundtable Conferences will be *Indication for Cardioversion, The Management of Metabolic Bone Disease, The Problem and Potential of LSD,* and *An Agonizing Reappraisal of Cancer Chemotherapy.*

Scientific and industrial exhibits and all scientific meetings will be in the newly expanded Las Vegas Convention Center.

Foundation Formalizes Physician's Relief Fund

At the Annual Meeting of the Board of Directors of the Iowa Medical Foundation in April, action was taken to establish formally a Foundation Relief Fund for Needy Physicians. A program of this nature was contemplated by the Foundation's founders for in the Articles of Incorporation considerable emphasis is placed on charitable activities.

The language approved in August by the Foundation's Executive Committee which formalizes the original intent of the Foundation's organizers reads as follows:

The triangular base upon which the Iowa Medical Foundation rests has at each of its three points a word which describes a principal facet of the Foundation's total program. These words are charitable, educational and scientific. Recognizing that personal hardship strikes at physicians and their families, it is appropriate for "charitable" to be one of these descriptive words.

From these founding principles set forth in the Articles of Incorporation by the organizers of the Iowa Medical Foundation, the Board of Directors has taken specific action to create a Physician's Relief Fund. Through this Fund there is an opportunity for professional persons to assist their colleagues who suffer adversity.

The full extent of need will come to light only as acquaintanceships with the profession reveal personal hardships. The Foundation invites individuals aware of instances where financial hardship is being experienced to share this information with the Executive Committee. The Committee in reviewing any case brought to its attention may, when it seems appropriate, counsel with the president of the county medical society or other physicians located within close proximity of the hardship case. With this necessary information, the Foundation through its Executive Committee will determine if and how it can be of service.

The Physician's Relief Fund will operate on the basis of loans rather than grants. Loans will be made on an individual basis with the circumstances of each case determining the amount of the loan, the method of making the loan, and the arrangements for repayment of the loan.

It is recognized that liquid assets of an individual may be reduced sharply during a period of extreme hardship, even though other resources, while not readily accessible, may be adequate or even substantial. Because of the varying circumstances from case to case, the Foundation elects to weigh the merits of each situation and to determine its participation accordingly.

In all instances, it is contemplated the loan interest rate will be low and the loan repayment program will be flexible to accommodate the circumstances of the case in question.

FALL CONFERENCE FOR COUNTY MEDICAL SOCIETY OFFICERS AND OTHER REPRESENTATIVES

Sunday, September 18, 1966

Grand Ballroom—Hotel Fort Des Moines, Des Moines, Iowa

9:00 a.m. REGISTRATION

9:30 a.m. APATHY OR ACTION?
S. P. Leinbach, M.D.
President, Iowa Medical Society

9:45 a.m. TWO SIDES OF THE COIN . . . MEDICINE AND THE PRESS
Harrison Weber, Moderator
Iowa Daily Press Association
Ed Heins
DES MOINES REGISTER
Jim Reed
Director, Communications Division, AMA
Robert Spiegel
Editor, MASON CITY GLOBE GAZETTE
Herman J. Smith, M.D.
IMS Delegate to the AMA

10:30 a.m. TAKE FIVE . . .

Year of Dedication
K. K. Hazlet, M.D.
Vice President, Iowa Medical Society

Rural Health
J. W. Gauger, M.D.
Chairman, IMS Rural Health Committee
Keith Long, Ph.D.
Chief, Environmental Toxicology Section, Institute of Agricultural Medicine, University of Iowa

Areawide Planning
Homer L. Skinner, M.D.
President, Health Planning Council of Iowa

Blue Shield
William A. Guy
Acting Executive Director, Iowa Medical Service

Community Health Week
Walter D. Abbott, M.D.
Member, IMS Public Relations Committee

Iowa Medical Foundation
John H. Sunderbruch, M.D.
Board Member, Iowa Medical Foundation

Usual and Customary Fee Concept
Kenneth E. Lister, M.D.
Iowa Medical Society Trustee

The College of Medicine
Robert C. Hardin, M.D.
Dean, University of Iowa College of Medicine

The State Department of Health
Arthur P. Long, M.D.
Commissioner of Public Health

Community Action Program
John C. MacQueen, M.D.
Director, Iowa Crippled Children's Service

11:15 a.m. UNDER THE DOME
John H. Kelly, M.D.
Chairman, IMS Legislative Committee
Robert B. Throckmorton, LL.M.
Legal Counsel, Iowa Medical Society
Harry Peterson
Legislative Department, American Medical Association

11:45 a.m. POLITICAL ACTION AND THE PHYSICIAN
Otis D. Wolfe, M.D.
Chairman, Iowa Medical Political Action Committee
Ben J. Clayburgh, M.D.
Former State Chairman, North Dakota Political Action Committee

12:15 p.m. RECESS

12:30 p.m. LUNCHEON—SPECIAL ADDRESS
Ernest B. Howard, M.D.
Assistant Executive Vice President, American Medical Association

2:00 p.m. MEDICARE—TITLE XVIII AND TITLE XIX
William A. Guy
Blue Cross (Part A Carrier) Blue Shield (Part B Carrier)
L. J. O'Brien, M.D.
IMS Representative on Title XIX Task Force
E. M. Smith, M.D.
Director of Medical Service, Department of Social Welfare

2:30 p.m. IOWA REGIONAL MEDICAL PROGRAM
F. G. Ober, M.D.
IMS Representative on Iowa Regional Advisory Group
R. C. Hardin, M.D.
Dean, University of Iowa College of Medicine

2:40 p.m. PROFESSIONALISM
Hugh W. Brenneman
Executive Director, Michigan Association of the Professions & Executive Director, Michigan State Medical Society

3:00 p.m. WHAT'S YOUR QUESTION?

Editorials

ABOUT THE EDITOR

We are sorry to report that our managing editor, Edward W. Hamilton, had a severe myocardial infarct on Sunday, July 24, but we are pleased to report that as the JOURNAL goes to press "Ed" is reported to be making good progress toward recovery. He is sorely missed by the headquarters staff.

MERCY MEDICAL DAY

This issue of the JOURNAL presents highlights from the 1965 program of the Annual Mercy Medical Day (Mercy Hospital, Des Moines). There is merit in such programs of a local nature to supplement the usual Medical Staff meetings. A day set aside for discussion of some subject in depth with speakers from outside the community serves to stimulate thought and action. Attendance by physicians from surrounding communities provides understanding among medical colleagues. The programs at Mercy Hospital were instituted as a device to recruit future interns, but they have served far beyond this end.

Another Mercy Medical Day will be observed on Saturday, October 15, 1966. The theme will be gastrointestinal problems. Again, a panel of highly regarded speakers will lead the discussions. The day selected has one of the least number of conflicts with other important matters—such as opening day of the hunting season, a University of Iowa football game at home or Sadie Hawkins Day. Futhermore, it will do your soul good to escape from the grind for a day.

—M. E. ALBERTS, M.D.

SURGICAL TREATMENT OF ULCERATIVE COLITIS

A recent contribution to the surgical treatment of diffuse ulcerative colitis by Stanley Aylett of the Westminster Hospital Teaching Group, London,* is a very significant one and deserves the serious attention of all physicians concerned with the management of patients with this grim disease. The British surgeon reports upon the experience gained, the lessons learned and the results obtained from the operative treatment of 300 cases of the disease between the years 1952 and 1965.

The unusual aspect of the surgical treatment carried out by Aylett and his group is that in the performance of colectomy the lower rectum is preserved and ileorectal anastomosis is done, thus preserving the continuity of the intestine and making a permanent ileostomy unnecessary. This is a singular departure from the customary surgical practice in which a complete proctocolectomy is performed and a permanent ileostomy is established in those patients with diffuse ulcerative colitis in whom operative treatment is necessary.

According to the author, repeated sigmoidoscopic examination of patients who responded to the medical treatment of ulcerative colitis showed that the previously existing ulcers became covered with epithelium, and this observation was confirmed by examination of biopsy specimens. It was significant that this improvement followed and did not precede the relief of the patient's toxemia and ill health and indicated that the ulcerative process is reversible. Thus it appeared that if the toxemia associated with the disease could be overcome—and the toxemia is severe in chronic and fulminating cases—the recuperative processes were adequate to resurface the ulcerative areas with epithelium and permit the intestine to again function normally.

Based on the observation of the reversibility of the ulcerative process in those patients who did respond to medical treatment, the Westminster group postulated that in those patients who failed to improve under conservative management it appeared possible that by the excision of the bulk of the source of the toxemia—the removal of the entire colon and the upper part of the rectum—the resulting relief from toxemia would permit the ulcerative process in the rectum to heal as the patient improved in health. This would obviate the necessity of a permanent ileostomy and permit the performance of ileorectal anastomosis at the time of colectomy. According to the author, the soundness of this hypothesis has been amply established in practice, and except in a few patients, experience has demonstrated that panproctocolectomy with the formation of an ileostomy is an unnecessary disability to inflict upon a patient requiring surgery for the cure of ulcerative colitis.

The author emphasizes that except for the fulminating case the initial treatment of patients with ulcerative colitis should be medical in nature, and that approximately two-thirds of them will respond to this conservative management, at least to enjoy a recovery from the present attack. If, however, the patient fails to improve despite all the advantages of modern therapy, surgical treatment is indicated. One common error is to continue medical treatment too long so that when operative intervention is decided upon the patient is so toxic and emaciated the risk is unnecessarily increased. The care of the seriously ill patient with ulcerative colitis is a combined medical and surgical responsibility—a safeguard which assures

* Aylett, Stanley O.: Three hundred cases of diffuse ulcerative colitis treated by total colectomy and ileo-rectal anastomosis. BRITISH M. J. 5495:1001-1005, (April 26) 1966.

Editorials continued...

that if an operation is necessary it will be done at an optimum time.

In the fulminating case of ulcerative colitis it was found that the chances of survival are better if surgery is performed after a brief period of intense preoperative care. In acute cases the indications for operative intervention are obviously a matter of clinical judgment acquired from long experience in the management of many patients. Listed as indications are:

1. Failue to improve after 7-10 days of intensive medical care.
2. Continued high fever and rapid pulse.
3. A rising pulse rate before the 10 day period of intensive care has elapsed.
4. Tenderness on palpation of the abdomen, indicating probable perforation.
5. Early abdominal distention.
6. Continued anemia in spite of transfusion.
7. Persistent clinical toxemia.
8. A persistent leukocytosis in excess of 10,000.
9. Generalized manifestations of the disease, such as pyodermia.

Those patients who responded satisfactorily to the medical management of the initial attack but who continued to have recurrences over the years or whose health was constantly impaired because of the disease were also considered proper cases for operative treatment. It is urged that in the continuing medical care of these chronic cases that a barium enema, a sigmoidoscopic examination, and liver function tests be carried out at least every nine months. The development of cancer in these chronic cases is a great hazard, and it usually occurs at the site of a stricture. Cirrhosis of the liver is also a recognized complication of ulcerative colitis of long duration.

The operative technic in the majority of cases consisted of colectomy with preservation of the lower rectum and an immediate end-to-end anastomosis of the ileum to the rectum. The anastomosis was always protected by an ileostomy and this was not closed until barium studies after several weeks demonstrated that there was no leak at the site of anastomosis. In fulminating cases and in those patients in whom the tissues of the rectal wall precluded anastomosis the colon was exteriorized and not until after the abdomen was closed was section of the bowel undertaken. This left the terminal ileum and the upper part of the rectum emerging through separate openings. Approximately a month later when the patient's condition was greatly improved ileorectal anastomosis was carried out.

The results of the formidable operations upon this group of 300 seriously ill patients is impressive. Despite the very critical condition of many of these patients, there were just 17 operative deaths, an overall mortality of 5.7 per cent. There were 10 non-operative deaths; however, with one exception all of these patients had returned to normal health before death occurred. In 14 patients (5 per cent of the survivors) it was necessary to convert to a permanent ileostomy for various reasons such as stricture, incontinence or the development of carcinoma.

At the conclusion of the study in April, 1965, follow-up study revealed a successful outcome of colectomy with ileorectal anastomosis in 259 of the 300 cases. In only 9 of the group was there any restriction to a normal way of life. The 250 patients were all alive and well and according to the author, "they follow all walks of life—from doctoring to engine driving, from acting to being mothers. They travel at home and abroad where duty or fancy takes them. They have born and sired children—they have put on weight often to a degree that necessitates dieting, and they regard themselves as normal, their illness being a thing of the past." Frequency of bowel movement is not a problem and if present it is controlled by small doses of codeine.

From the experience with this group of 300 cases, Dr. Aylett concludes that "ulcerative colitis can be cured in the vast majority of cases without subjecting the patient to permanent ileostomy by the use of the operation of total colectomy and ileorectal anastomosis." He acknowledges that the immediate postoperative care of this type of patient is often very difficult and all forms of surgical complications are encountered. He credits the dedicated care of the team of doctors and nurses for much of the success in the treatment of these patients.

The author asserts that ulcerative colitis is on the increase not only in England but throughout the world, and he emphasizes that only by setting up specialized units for its treatment will the high mortality and morbidity be reduced. It is also only in such centers that the real cause of this killing disease can be ascertained and eliminated.

WHO'S AFRAID OF CYTOPLASMIC POLYHEDROSES?

A chapter in a recent pathology textbook is devoted in large part to the cytoplasmic polyhedroses. In the interest of accuracy, and to avoid misunderstanding, the following pertinent material from that chapter is presented by direct quotation. However, in two or three instances, an editorial privilege has been exercised by substituting one word for another in order either to simplify or to shorten a passage.

"The polyhedroses are virus diseases that are characterized by the presence in the tissues of large numbers of many-sided crystals—polyhedra —which contain the virus particles within them.

The polyhedroses have been known for many years. It is, however, only recently that they were shown to consist of two distinct types with different disease symptoms, different sites of virus multiplication, and viruses of different morphology. These two kinds are now divided into two large groups, the nuclear and the cytoplasmic polyhedroses, according to the site of virus multiplication. It is with the latter group that we are concerned.

"In the decade since the first cytoplasmic polyhedrosis was described, the number of this type of disease recorded has become very large. Indeed, they probably outnumber the nuclear polyhedroses, although it is not possible to say as yet whether the many cytoplasmic polyhedroses recorded are all due to different viruses. Numerous examples of latent infection also occur.

"It has long been debated whether the shape, but not the size, of the polyhedral crystal is characteristic of a given polyhedrosis; or, in other words, does the virus govern the exact formation of the inclusion body? This certainly seems to be so with the nuclear polyhedroses. It has been observed that two types of cytoplasmic polyhedra occurred, a hexagonal and a tetragonal type. By isolating these, two viruses or virus strains were obtained, each with its characteristic polyhedral crystal. It seems, therefore, that in some cases the shape of the cytoplasmic polyhedral crystal is associated with a particular virus.

"The outward appearance of different ones affected with nuclear and cytoplasmic polyhedroses differ considerably, and this is mainly due to the respective sites of virus multiplication. In the nuclear polyhedroses the epidermis is one of the main organs attacked, and this is responsible for the characteristic limp cadavers which hang down from the food plant, to which they remain attached by the abdominal legs. Many infected with cytoplasmic polyhedroses lag greatly behind the normal in their development; there is no outstanding symptom at first, but affected individuals can be recognized by their small size, loss of appetite, and, sometimes, disproportionately large head or long whiskers. Later, the polyhedra developing in the intestine can frequently be observed through the dorsal integument as a pale yellow or whitish area. In late stages of the disease, polyhedra are frequently regurgitated or voided in large quantities with the feces. A peculiar symptom apparently connected with a cytoplasmic polyhedrosis has been observed in certain individuals in a late stage of the disease. It occasionally happens that the rectum is completely extroverted; this extroversion is possibly caused by a blocking of the alimentary canal accompanied by persistent effort on the part of the individual to void the polyhedra."

But let us forget for a moment, if we can, that frightful extroversion, and return to our original query: Who's Afraid of Cytoplasmic Polyhedroses? Well, hardly anybody at all except the Lepidoptera—butterflies and moths to you. The preceding direct quotations, incidentally, are from a textbook on insect pathology edited by Edward A. Steinhaus.

If anyone has actually read this editorial, please be patient and tolerant. It has been a long hot summer.

—DANIEL F. CROWLEY, M.D.

CHANGE OF PACE

Often times it is not a vacation a doctor needs because of fatigue from a busy practice, but rather a change of pace.

Since 1935, except for active duty during World War II, I have enjoyed a two-week Summer Encampment as a Medical Officer in the Iowa National Guard. In addition to this, my schedule through the years has included a week-end drill once each month.

I have cultivated many friendships among the officers and enlisted men through these years. These associations have been refreshing and have helped me to better understand people, an ability which doctors need if they are to practice good medicine.

A doctor's life is normally so preoccupied with medical matters that he often fails to mingle with men in other walks of life. He becomes stilted in his thinking, limited in his opportunity for social development, and single faceted to the extent of being immune to other community activity and responsibility.

The National Guard of Iowa needs approximately 10 more doctors. With few exceptions, doctors who have accepted commissions in the Guard have gone on to complete enough years to qualify for a worthwhile retirement pension at age 60.

There is more than financial return. All of us in the Guard feel we are contributing something worthwhile, in a professional way, to aid other men who are willing to serve in this manner. Many doctors are concerned about the chances of being called to active service from the Guard. Such fear is groundless; if an emergency arises, like World War II, all doctors physically fit are considered for active duty, whether they are members of some reserve unit or not.

After 33 years as a commissioned officer in the Reserve Component, I regret I have only a little more than a year to serve before retirement. I sincerely wish that more doctors in our state would take advantage of the opportunities available to them through a commission in the National Guard, or through reactivation of a former reserve commission.

—FLOYD M. BURGESON, M.D.

Editorials continued...

TREATING THE PSYCHOSOMATIC

It is fortunate, indeed, that the Almighty in his infinite wisdom created the gastrointestinal tract so that it could function under a variety of stimuli, both nervous and chemical. It can continue functioning after various nerves have been severed and during various chemical imbalances. This extreme physiochemical complexity, however, has been very frustrating to the medical profession in its attempt to relieve deranged function of the gastrointestinal tract. It used to be thought that the stimulation of the parasympathetic fibers would increase motility of the gut and stomach and open the sphincters, and that contrary-wise stimulation of the sympathetics would decrease the motility and function of the gut and contract these sphincters. It seemed to follow easily, therefore, that paralysis of the parasympathetic fibers would result in a diminution or slowing of the intestinal tract and the contraction of the sphincters.

Accordingly, many drugs have been put upon the market whose effect was designed to block the parasympathetic fibers. Atropine and Belladonna have been used for many years and recently newer "antispasmodics" have been placed upon the market, the last one being Methixene Hydrochloride (Trest).

The difficulty in analyzing these substances is astronomical. It is complicated by the fact that some post-ganglionic sympathetic fibers are actually cholinergic and some parasympathetic fibers are probably adrenergic. Furthermore, satisfactory digestive tract activity may continue in the absence of either one or the other by virtue of impulses mediated through the intramural nerve plexus. The actual scientific measurement of the activity of any drug is also difficult because of artificial means which have to be employed to measure such functions. A balloon placed in the intestinal tract is an unnatural stimulus as is an exteriorized portion of gut in an experimental animal. Furthermore, it is well known that the hypothalmus, with its center of coordination of emotional experiences with sympathetic and visceral function and with its connections with the cerebral cortex, makes emotions and cerebration also connected with the functions of the gastrointestinal tract. The added connection, therefore, between the hypothalamus and the cerebral cortex and the gastrointestinal tract make such things as suggestibility, the attitude of the doctor, and the patient's emotions, an added difficulty in analyzing the specific effect of a given drug. It is well known that placebos given with suggestion on the part of a doctor have almost as good an effect as the so-called direct effect of the drug upon the gastrointestinal tract.

It comes as no great surprise, therefore, that the AMA Council on Drugs mentions in its critique on the newest "anticholinergic agent" that "although the results of clinical studies based upon objective criteria did not show conclusively that the drug consistently and significantly decreases intestinal motility in man reports of a few control studies indicate that it provides subjective relief in some patients with functional bowel disorders. No comparative studies with similar antispasmodics . . . have been reported and present evidence is insufficient to determine the relative therapeutic usefulness of Methixene."

It seems that it is perfectly justified to prescribe one or another of these so-called "anticholinergic drugs" inasmuch as they do little if any harm. It should be noted that most of the "anticholinergic drugs" on the market are combined with a "sedative or tranquilizer."

The plea of this editorial is not that we should discontinue use of these drugs but that we should not be fooled when the patient comes back saying he is feeling better, nor should we rely simply on a statement (by a drug house) that a certain percentage of patients taking the drug have subjective relief. Furthermore, inasmuch as most of the conditions we are attempting to treat with these drugs are "psychosomatic," we should spend more of our time on the chemical changes occurring in the brain and less of our time on the reported primary influence on the gastrointestinal tract.

—DANIEL A. GLOMSET, M.D.

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THE HEART IS MIGHTIER THAN THE SWORD

Following is a reprint of Jim Murray's Column from the DES MOINES SUNDAY REGISTER of August 7, 1966.

Los Angeles, California—There are large areas of the world where "Hope" comes in from the sea.

There was the African boy who had such a large tumor behind his eye there was no room for the eye. The witch doctor treated it with a red ribbon. The Communists tried to convince him "Hope" was just a lousy stinking capitalist hoax. But when they took the tumor out, both the African witch doctors and the Moscow ones lost a believer.

There was the troubled mother who came down from the tribal hills with her 4-year-old who had swallowed lye, burned his esophagus, and could not eat solid food. His name was "Bah Maim" and it pretty well summed up his outlook and his condition.

When he arrived at the port of Hope, his esophagus was repaired, obstructions removed, and, within six weeks, he was eating bread and jam like every other 4-year-old.

"Hope" is afloat in the world, thanks to a dedicated band of physicians and philanthropists who demothballed not a warship, but a hospital ship, declared war not on people, but on germs, and set out to sell America with a stethoscope, not a bayonet.

In parts of Malaysia, West Africa and Latin America, it is the Good Ship Lollipop, Peter Pan's schooner and the Robert E. Lee rolled into one.

It is the most spectacular justification of Robert Fulton's invention ever. It doesn't cruise to romantic places, it sails the uncharted waters of ignorance, poverty, fear and disease.

Its biggest gun is a scalpel, or a thermometer. Its sailors don't draw blood, they give it. It carries a cargo of new legs, eyes, hearts, lungs, livers—and hope. It flies the flag of humanity.

When it put into Peru, a group of Castroites fired a figurative shot across its bow. Bearded medical students, riding a dilapidated burro to ridicule Uncle Sam's mercy ship, convinced the natives it was a cruel Yankee experimentation ship.

A hell-ship sent to test the reactions of fallout on the natives so the lessons could be applied when Uncle Sam loosed his hell bombs on the world.

Some 30,000 inoculations and 1,000 major surgeries (performed before medical students so they could learn techniques 50 years in advance of theirs) later, and the Good Ship Hope sailed out of the harbor in front of 40,000 Peruvians who lined the shore with tears and the water with flowers.

And the Castroities had long since shaved their beards, sent their burro back to the hills and become good doctors instead of revolutionaries.

The Hope stays in a harbor a year. It stays in a heart a lifetime. It is an anchored white symbol of America's concern for suffering. Its supplies are not turned over to local distributors, who can place a sickle over the Stars and Stripes.

Its administrative expenses do not wind up in a Swiss bank account, but in a withered arm or a cancerous chest. It brings only the riches of health —the only permanent, untaxable kind. Its fight is with the invisible enemy of everybody.

It should come as a fleet. It has a waiting list of doctors, who serve for free in two-month shifts. And it has a waiting list of sufferers. About one-fourth of the world, by last count. It goes only where invited. It has more invitations than a rich relative.

It costs $5 million a year to operate—about the price of a jet bomber. There are some who think it is a lot less clumsy way to win converts to democracy.

THE KIDNEY FOUNDATION OF ILLINOIS, INC.

An affiliate of the
National Kidney Foundation

presents the

2ND ANNUAL MEDICAL SYMPOSIUM ON CLINICAL ADVANCES OF RENAL DISEASES

at the

Sheraton-Chicago Hotel
Grand Ballroom
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WEDNESDAY, OCTOBER 5, 1966
from 9:00 am - 5:00 pm

GUEST SPEAKERS

Professor Douglas A. K. Black
Manchester Royal Infirmary
Manchester, England

Dr. Priscilla Kincaid-Smith
Royal Melbourne Hospital
Melbourne, Victoria, Australia

Professor Malcolm D. Milne
Westminster Hospital Medical School
London, England

Professor H. D. De Wardener
Charing Cross Hospital Medical School
London, England

Dr. John T. Grayhack
Northwestern University Medical School
Chicago, Illinois

Professor Jean Hamburger
Clinique Des Maladies Metaboliques
Hospital Necker
Paris, France

TOPICS INCLUDE

"Disturbances of Renal Concentrating Mechanism"
"Medical and Surgical Aspects of Pyelonephritis"
"Chronic Dialysis and Renal Transplantation"
"Treatment of Chronic Renal Failure"
"Clinical Pharmacology of Diuretics"
"Drug Treatment of Renal Disease"
"Renal Disease in Pregnancy"

REGISTRATION FEE: $15.00 including luncheon, refreshments and other services/$6.00 for students, interns, residents, etc. on presentation of credentials.

Tickets now available from John Lane, Executive Director—Kidney Foundation of Illinois, Inc.—127 North Dearborn Street—Suite 701—Chicago, Illinois 60602.

Iowa Chapter of the American Academy of General Practice

18th Annual Scientific Assembly

Many events of interest await family doctors attending this first fall Scientific Assembly of the American Academy of General Practice to be held at the War Memorial Auditorium in Boston from October 10 to 13. The Scientific Assembly, which opens at 1:30 p.m. on Monday, October 10, will get underway with a program of interest to the ladies as well as the physicians. Title of the opening session will be "The Angry Adolescent." Taking part in this discussion will be Dr. J. Roswell Gallagher of Boston, Mass.; Dr. Stuart M. Finch, Ann Arbor, Mich.; Dr. Gerald Alpren, Indianapolis, Ind.; Judge Leo B. Blessing, New Orleans, La., judge of the Orleans Parish Juvenile Court; and Mr. Edgar Z. Friedenburg of Davis, Calif.

Other well-known personalities in medicine will be participating in the three-day program which will include sessions on such subjects as "Therapeutic Nuggets" which will involve discussion of "Mediastinoscopy," "Selection of Sedative Drugs," and "Injection of Nitrogen Mustard Into Joints Affected by Rheumatoid Arthritis." An entire afternoon will be devoted to a comprehensive review of "Obstetrics and Mental Retardation," a discussion on "Strokes," and another on "Diabetic Neuropathies." There will also be two half-days of bedside clinical "refresher" courses at famous Massachusetts General and 16 other top hospitals.

The Congress of Delegates will open at 10:00 a.m. at the Sheraton-Boston Hotel on Saturday, October 8, and will close at noon on Monday, October 10. The President's Reception will be held at the Sheraton-Boston Hotel on Wednesday, October 12, honoring outgoing president, Dr. Amos N. Johnson of Garland, North Carolina. This reception will follow the inauguration of the new president, Dr. Carroll L. Witten of Louisville, Ky.

Don't forget the 18th Annual Scientific Session of the Iowa Chapter of the AAGP to be held at the Hotel Savery, Des Moines September 19-20, 1966.

Skin Diseases Common to Man and Animals

An all-day symposium on Skin Diseases Common to Man and Animals will be held November 2, 1966, in Palm Springs, California, at the El Mirador Hotel. The co-sponsors are the Committee on Cutaneous Health and Cosmetics of the American Medical Association and the American Animal Hospital Association.

The list of speakers is headed by Hans Selye, M.D., Ph.D., professor and director of the Institute of Experimental Medicine and Surgery of Montreal. Dr. Selye will speak on "The Mast Cell—Recent Problems." William Montagna, Ph.D., will present the first formal paper of the program on "Comparative Anatomy and Physiology" and Robert J. Gorlin, D.D.S., will be the luncheon speaker on "Oral Disorders in Animals and Man—A Comparative Study."

Physicians and veterinarians will contribute equally to the balance of the program, to provide a thorough review and an opportunity to evaluate contributions of researchers in their respective clinical areas. The physicians include Drs. Milton Orkin, Walter Nickel, Otto Stegmaier, Robert Goltz, Adolph Rostenberg, Norman Levan, Victor Newcomer, J. Walter Wilson, William Epstein, and Harold Schneidman. The veterinarians include Drs. James Conroy, George Muller, William Kaplan, Keith Maddy, and Robert Schwartzman.

The symposium on Skin Diseases Common to Man and Animals will follow the annual meeting of the Pacific Dermatologic Association, October 27 through November 1, also in Palm Springs.

A $10 fee covers registration and luncheon for the November 2 symposium. Printed programs and registration forms are available from the Committee on Cutaneous Health and Cosmetics, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

President's Page

As physicians, we know that one of the greatest compensations we receive is gratitude from the patients we serve. However, as physicians we share a common American fault; we assume and take for granted the many daily efforts of others in our behalf. Desimus Ausomius, an early Roman wrote: *Earth produces nothing worse than an ungrateful man.*

Immeasurable and often unrecognized is the true extent and total importance of the many accomplishments of the IMS staff in behalf of the medical profession and the citizens of Iowa. Although smaller in size than most, our staff is recognized as one of the most effective among the state medical societies in the country. Each staff person is extremely able, thoroughly informed, and totally dedicated to the belief that an effective medical society will help provide effective and high quality medical care. To this end our staff spends countless hours beyond what is considered the usual working day.

The recent illnesses of Dennis Kelly, Sr., M.D., Scientific Editor, and Edward Hamilton, Ph.D., Managing Editor, focus attention upon our Society's JOURNAL. This publication, in quality of editorship, scope of reporting, and attractiveness of format, ranks high among the best in the country. Medical journalists everywhere consider it superior. Just as the trademark usually denotes fine merchandise, the IMS JOURNAL is the worthy reflection of an outstanding state medical society. Much of the credit for our high rank deservedly belongs to our entire staff.

We should let our staff know of our appreciation. Dr. Kelly and Ed Hamilton should be told that we have missed them. A Greek philospher wrote, *Swift gratitude is sweetest; if it delays all gratitude is empty and unworthy of the name.*

D. P. Leinbach

President

Iowa Association of Medical Assistants

Laboratory Communications

Receiving, sending, and reporting the findings of laboratory tests requires absolute accuracy. *There is no margin for error,* you, the medical assistant, must do your part because these tests are vital in the diagnosis and treatment of the patient. You must keep three things in mind while doing anything connected with laboratory procedures. They are: (1) correct identification, (2) accurate recording, and (3) honesty.

The first two are readily understood. To list honesty may seem unnecessary, still there are reports of well-intentioned, but misguided, medical assistants who let their findings be swayed by what they think their doctor expects to find. In other words, a laboratory test should be approached objectively, without any preconceived notion of what the finding will be. It is tragic enough when a mistake is accidentally made, but even worse when the mistake is caused by the medical assistant's lack of objectivity or mental honesty.

Regardless of whether you do the routine laboratory test, or request the procedure from another area and receive the reports, it is important to familiarize yourself with normal values of routine tests such as CBC, Blood Sugar, Prothrombin Times—those chemistries which pertain to the specialty of your employer.

THE TELEPHONE REPORTS

Generally, the Clinical Laboratory will telephone the findings of a test, then follow up with a typed report by mail. It is the phone report which requires your complete attention and accuracy. If you are familiar with the terminology, know the normal values and the many abbreviations, you will be more alert to reports that may sound abnormal. It is a good procedure for you to ask the reporter to repeat the findings.

Never hesitate to ask the reporter to repeat the findings in a test about which you are not sure or which is unfamiliar to you; ask what the normals are. *Don't Guess.* Be sure you have the patient's name correct, date the report and attach this to the patient's record.

REQUESTING TEST FOR PATIENTS

As a medical assistant, it may be your duty to request laboratory (x-ray or clinical) tests. Make the appointment; then check with the technician about the patient's orders. If the orders are involved, such as diets can be, be sure to write down the instructions or secure printed directions.

If you know that certain tests are done routinely on patients in your office, it is a good idea to keep a record for yourself with phone numbers of the laboratories, their locations, names of the doctors and their technicians, names of the tests, the preparation of the patient and the condition for which the test is done.

LABORATORY TESTS BY THE MEDICAL ASSISTANT

Laboratory tests most commonly done by the medical assistant who is not a laboratory technician are urinalysis, red blood cell and white blood cell counts, microhematocrit, and basal metabolism rate. A doctor or a laboratory technician usually instructs the medical assistant and for a period of weeks checks her results to be sure she is accurate. Because of the importance of these tests, it is usually suggested that the medical assistant attend a reputable school or laboratory to learn the more involved procedures.

The clinical laboratory, the drug manufacturers, and the medical book publishing companies can provide a wealth of material to aid the medical assistant as she seeks to increase her knowledge of laboratory procedures and communications.

A simplified form which can be used for reporting by the medical assistant on laboratory tests might read like this:

Urinalysis:

Name ..... Date .....
Color ..... Turbidity .....
Spg ..... Ph .....
Alb ..... Sug .....
Hematest ..... Ketotest .....

Blood Study:

Name ..... Date .....
RBC ..... WBC .....
Hb ..... % ..... Gms.
mm. 30 m.
Cl ..... Sed Rate ..... mm. 1 hr.
Dextrostix .....

The reporting still requires the medical assistant to know where to put the decimal point; where to use the zeros; whether it is Mgm., mg., gram, microgram, or what? So for better laboratory communications secure a list of normal values from the clinical laboratory. Do not guess! Be sure!

—Marian Little

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Results of Medicare Surveys of Iowa Hospitals

The following report is a statistical tabulation of results of the State Department of Health's survey of Iowa's hospital facilities for participation in the Health Insurance for the Aged Program which became effective on July 1, 1966.

There were 160 potential providers of hospital services within the state eligible for participation in the Program, of which 65 general hospitals and one tuberculosis hospital were accredited by the Joint Commission on Accreditation of Hospitals, 87 were non-accredited general hospitals, six were non-accredited psychiatric hospitals, and one was a non-accredited tuberculosis facility.

All of the 160 potential providers of hospital services submitted an application indicating interest in participating in the Program and requesting a Health Department determination of eligibility. To be eligible for participation in the Program, the 65 accredited general hospitals had only to submit an approvable utilization review plan which was accomplished, and all of these facilities have been certified and are participating in the Program. The accredited tuberculosis hospital was certified following survey.

Of the 87 non-accredited general hospitals, 74 were certified for participation in the Program, one hospital withdrew its application, and 12 hospitals were denied certification initially. It is anticipated that some of the 12 hospitals which are not presently participating in the Program will become certifiable when the necessary corrections and improvements in services have been effected.

Four of the psychiatric hospitals have been certified, and the remaining two facilities have been denied participation in the Program at this time. The remaining non-accredited tuberculosis facility withdrew its application prior to survey, and has since converted its operation to that of an extended care facility.

The 1966 Iowa State Plan for Hospitals and Related Health Facilities indicates a total of 13,881 general hospital beds existing in the state. Of this total, the certified general hospitals account for 13,680 beds, leaving a balance of 201 beds which are not presently certified. The certified beds represent 98.6 per cent of the total general hospital beds in the state, leaving a balance of only 1.4 per cent of the general hospital beds which are not presently certified.

A review of the survey reports of the non-accredited general hospitals reveals that the medical records department was the department found most often not in compliance with the Conditions of Participation. Of the 86 non-accredited hospitals surveyed, a total of 43 (or 50 per cent) of the hospitals' medical records departments were found not to be in substantial compliance with the Conditions of Participation as promulgated by the Secretary of the Department of Health, Education and Welfare.

The second most frequently occurring deficiency was non-compliance with the pharmacy requirements. A total of 42 hospitals were found not in substantial compliance with this Condition, which represents 48.8 per cent of the total hospitals surveyed.

The medical staff Condition of Participation was the next most commonly noted deficiency, with 39 (or 45.3 per cent) of the hospitals not in substantial compliance with this Condition. Some 29 of the hospitals (or 33.7 per cent) were not in substantial compliance with the dietary department Condition of Participation. A total of 27 (or 31.4 per cent) of the hospitals were found not to be in substantial compliance with the physical environment Condition of Participation. This was a result of physical plant inadequacies, inadequate fire plan and rehearsals, inadequate service elements, lack of Infection Committees, or combinations of these requirements. A total of 25 (or 29.1 per cent) of the hospitals failed to meet the governing body Condition of Participation.

The next most frequently occurring deficiency was the lack of a medical library, which was the case with 24 hospitals (or 27.9 per cent of the total). A total of 23 (or 26.7 per cent) of the laboratories were found not in substantial compliance with the Condition of Participation at the time of survey. The nursing department was the next most frequently occurring deficiency, with a total of 22 hospitals (or 25.6 per cent) of the 86 hospitals not in substantial compliance in this category. The complementary departments, which include both the surgery and anesthetic departments as a combined evaluation, were found not in substantial compliance in 18 hospitals (representing 20.9 per cent of the total.)

A total of 12 (or 14.0 per cent) of the emergency

departments were not in substantial compliance. Nine of the radiology departments (or 10.5 per cent) were deficient. Three out-patient departments were deficient (representing 3.5 per cent of the total). Three hospitals were also found to be not in compliance with state and local laws regarding hospital operations.

Some immediate benefits have been noted in Iowa as a direct result of implementation of the Health Insurance for the Aged Program. Approximately 40 hospitals have acquired the part-time or consulting services of qualified dietitians in cases where these services were not formerly available. A number of hospitals have also acquired the services of consulting pharmacists on a routine, recurring basis where services of these professionals formerly were not utilized.

Many of the hospitals with medical record department inadequacies have either obtained the services of consulting medical records librarians or have succeeded in training their own medical record department personnel in cooperation with other participating hospitals with qualified personnel or by attendance at regional training conferences sponsored jointly by the Iowa Hospital Association, Blue Cross (fiscal intermediary), and the Iowa State Department of Health.

Hospitals which were found to be operating without formally constituted and adopted by-laws have since, with the assistance of legal counsel, adopted and submitted approvable governing body by-laws for operation of the facility.

Likewise, the medical staffs of some hospitals which were found to be operating without benefit of formal by-laws have since adopted by-laws governing their activities. In some cases, medical staffs have been completely reorganized for more effective operation and, in cases where only sporadic meetings have been held in the past, the staff has reinstituted a policy of holding routine staff meetings as required.

The nursing department of several hospitals which formerly were operating without a registered nurse on duty on each shift have augmented the nursing staff with additional R.N.'s to meet this requirement.

In cooperation with local fire authorities, many of the hospitals have adopted written fire control plans where they were not previously available, and have begun to implement the plans with rehearsals and review by the local fire departments.

The absence of written policies, procedures, and minutes of meetings was a common problem. Hospitals have begun to overcome this problem by keeping accurate and complete records and minutes of meetings as well as by recording written policies and procedures for their operations.

In several instances hospitals have adopted formal employee health programs where they did not previously exist.

In conclusion the Health Insurance Benefits Program has resulted in a general upgrading of existing facilities and services, which should result in an over-all improvement in the level of patient care rendered by the hospitals of Iowa. The great majority of the hospitals surveyed indicated that the survey was beneficial to the facility as an over-all review mechanism, and the

Morbidity Report for Month of July, 1966

Diseases	1966 July	1966 June	1965 July	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	160	488	111	Jefferson, Johnson
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	157	705	53	Buena Vista, Clay, Scott
Whooping cough	7	10	2	Crawford
Brucellosis	3	1	1	Crawford, Poweshiek, Woodbury
Chickenpox	35	618	49	Scott
Meningococcal meningitis	3	2	1	Black Hawk
Mumps	77	286	54	Dubuque, Mills, Scott
Poliomyelitis	0	0	2	
Infectious hepatitis	39	49	29	Bremer, Clinton, Des Moines, Dubuque
Rabies in animals	18	14	27	Greene, Hamilton, Iowa
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	26	28	23	For the state
Syphilis	98	76	75	For the state
Gonorrhea	284	239	338	For the state
Histoplasmosis	1	3	1	Decatur
Food intoxication	0	0	0	
Meningitis (type unspec.)	2	5	1	Clinton, Grundy
Diphtheria carrier	0	0	0	
Aseptic meningitis	3	0	1	Black Hawk, Chickasaw, Dubuque
Salmonellosis	6	7	11	Polk
Tetanus	0	1	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	2	
H. influenzal meningitis	1	2	0	Black Hawk
Amebiasis	0	3	2	
Shigellosis	3	3	4	Scott
Influenza	0	717	0	

cooperation extended by the individual facilities was excellent, with few exceptions. The consultation and assistance rendered by the survey teams has resulted in an improved public image for the Department. It is hoped and anticipated that through this cooperative endeavor many hospitals not now presently accredited will be stimulated to seek accreditation by the Joint Commission on Accreditation of Hospitals.

Influenza Immunizations 1966-1967

The Surgeon General, Friday, July 22, 1966, released the recommendations for influenza immunization and control for the season 1966-1967 as developed by the Public Health Service Advisory Committee on Immunization Practices. The Surgeon General's release follows:

"The Committee noted that influenza was reported in 49 of the 50 states during the winter and spring of 1965-66. 'Type A_2 virus was recognized in most of the western states while Type B predominated east of the Mississippi River, particularly in states along the Atlantic Coast. In 20 states, activity of both types of influenza viruses was demonstrated,' the report stated.

"Because of the widespread recognition of both Types A and B influenza viruses in 1965-66 and the characteristics of infecting strains, the Committee felt that relatively little influenza activity will be recognized in 1966-67. The Committee pointed out, however, that it is reasonable to expect that limited outbreaks of Type A_2 influenza will occur in parts of the United States not experiencing Type A disease in 1964-65 or 1965-66. Similarly, the possibility of some Type B influenza is recognized, particularly in the southwest.

"The Advisory Committee reiterated previous recommendations for vaccination of the chronically ill and persons in older age groups. These include:

"Persons of all ages who suffer from chronic debilitating disease, including chronic and cardiovascular, pulmonary, renal or metabolic disorders. Patients residing in nursing homes, chronic disease hospitals, and other such environments should be considered at particular risk since their more crowded living arrangements may allow greater spread of disease once an outbreak has been established.

"Persons over 45 years of age and particularly those over age 65 since during major outbreaks increased mortality has been recognized in these age groups.

"The committee emphasized, 'Vaccination should begin as soon as practicable after September 1 and ideally should be completed by mid-December. It is important that immunization be carried out before influenza occurs in the immediate area since there is a two-week interval before development of antibodies.' "

VACCINE COMPOSITION

The antigenic composition of the vaccine for the 1966-1967 season is unchanged from last year:

Type	Strain	CCA Units Per Ml.
A	PR8	100
A_1	Ann Arbor 1/57	100
A_2	Japan 170/62	100
A_2	Taiwan 1/64	100
B	Maryland 1/59	200
		600

DOSE AND SCHEDULE OF VACCINATION

Vaccination should begin as soon as practicable after September 1 and ideally should be completed by mid-December. It is important that immunization be carried out before influenza occurs in the immediate area since there is a two-week interval before the development of antibodies.

A. Primary Series—Those not vaccinated since July 1963 when the last major change in vaccine formulation was made should receive an initial subcutaneous dose of polyvalent vaccine followed by a second dose two months later. It is to be pointed out, however, that even a single dose can afford significant protection. A second dose given as early as two weeks following the first will enhance the protection.

ADULTS AND CHILDREN OVER 10 YEARS

1.0 ml. dose subcutaneously on two occasions as specified above.

CHILDREN 6 TO 10 YEARS*

0.5 ml. dose subcutaneously on two occasions as specified above.

CHILDREN 3 MONTHS THROUGH 5 YEARS*

0.1-0.2 ml. of vaccine given subcutaneously on two occasions separated by one to two weeks followed by a third dose of 0.1-0.2 ml. about two months later.

B. Revaccination—Those vaccinated since July 1963 need receive but a single booster of vaccine at the dose level specified for the primary series.

CONTRAINDICATIONS

Since the vaccine viruses are produced in eggs, the vaccine should not be administered to those who are hypersensitive to eggs or egg products.

* Since febrile reactions in this age group are common following influenza vaccination, an antipyretic may be indicated.

THE JOURNAL *Book Shelf*

BOOK REVIEWS

United States Army in World War II, The Technical Services, The Medical Department: Medical Service in the Mediterranean and Minor Theaters, by *Charles M. Wiltse* (Washington, D. C., Office of the Chief of Military History, Department of the Army, 1965, $5.00).

This is a complete coverage of the Army Medical Service of the smaller regions in the Atlantic Defense Areas including the North Atlantic Bases, Bermuda, the Azores, Eastern and Central Canada, the Caribbean, and the South Atlantic. The invasion of North Africa is covered completely and then the invasion of Sicily and up the stretch of Italy, the invasion of Southern France, and the Northern Phase into the Alps.

To any medical officer participating in any of these campaigns this would be a very rewarding text to read, or for that matter, any soldier wounded in that area would find this account familiar in many aspects.

One of the most interesting accounts was that of the Anzio Beachhead. Here on the sands at sea level, under constant fire "from January 22 through May 22, 1944, the medical service cared for 33,128 patients of whom 10,809 suffered from battle wounds, 4,245 from injuries and 18,074 from disease. In addition to these an unrecorded number of civilians were cared for, since no other facilities were available to them. Some 22,000 civilians were eventually removed from the beachhead, only 750 being allowed to remain. Casualties among the medical department personnel were high: 92 killed, including 6 nurses; 387 wounded; 19 captured; and 60 missing in action—588 in all."

The North Africa Campaign would be a great interest to many officers and men of Iowa including medical officers, since that is the region in which the 34th Division participated. On pages 125 and 126 mention is made of the combat near Feriana where an entire collecting company of the 109th Medical Battalion was captured together with most of the medical detachment of the 168th Infantry Regiment—in all, 10 medical officers and more than 100 enlisted men. This capture included several medical officers who are now practicing with us here in Des Moines.—*C. Harlan Johnston,* M.D.

Hand Surgery, by *J. Edward Flynn,* M.D. (Baltimore, The Williams & Wilkins Company, 1966, $38.50).

On my desk, for review, is a handsome new book with bright red cover, entitled hand surgery. In this book, J. Edward Flynn has skillfully and painstakingly assembled the papers written by 58 authors, and has himself contributed five.

Each article is a rather complete account of one of the facets of hand surgery, whether it be surgical, anatomical or pathological. Illustrations are generously supplied, including photographs, drawings and reproductions of radiographs.

A foreword with comments on each chapter by Sumner L. Koch, puts the contents of this book in proper context. Dr. Koch has himself published papers during the past 40 years, dealing with nearly every phase of the subjects presented.

A very interesting chapter on the History of Hand Surgery by the late Henry Marble of Boston relates many historical landmarks of this specialty, and is spiced with personal experiences of his early days at the Massachusetts General Hospital.

Among the trans-Atlantic contributors, four are eminent authorities in their respective fields: Pulvertaft in tendon grafting, Brand in tendon transfer, Moberg in sensation after nerve repair, and Verdan in tendon repair. The latter article is perhaps the most important in this book because it focuses attention on the controversial question of primary flexor tendon repair in "No Man's Land." Verdan is a leading exponent of primary repair (rather than secondary tendon grafting) and this reviewer is of the opinion that Verdan's view must eventually prevail.

Dr. Flynn is to be highly commended on the success of what must have been a prodigious task of organizing and editing. This book will take its place beside Bunnell's surgery of the hand as a rich source of information in this field. It is notable that most of the contributors to this book are surgeons who were stimulated to enter the field of hand surgery by that great surgeon and teacher, Sterling Bunnell.—*Julian M. Bruner,* M.D.

Progress in Clinical Pathology, edited by *Mario Stefanini,* M.D. (New York, Grune & Stratton, Inc., 1966, $23.75).

Present in this first volume of a proposed series are many of the subjects of interest to those of us in the field of clinical pathology. Eight of the 15 chapters are on biochemical subjects ranging from fluorometric technic to enzymology to trace elements. Also included are three chapters dealing with the study of blood proteins. The very timely subject of hereditary metabolic defects in the newborn is also adequately covered. In these chapters the writers have briefly outlined the history, the technics, and interpretation of the results of current clinical tests. Following each chapter is a list of references of the current pertinent literature.

This book is a fine reference volume, and is recommended for a general survey of a specific topic in clinical pathology, but it would have limited use in the

(Continued on page 964)

THE DOCTOR'S BUSINESS

Is Your Home a Sound Investment?

HOWARD D. BAKER
Waterloo

If someone were to tell you that the difference in cost between a $35,000 residence and a $70,000 residence can amount to $130,000 you would be inclined to think that he had completely lost his wits. However, it is true!

For the past several years, we have noted an ever-increasing trend toward bigger, more costly homes—far too frequently at the expense of a sound over-all financial plan. Just how much "status symbolism" is involved in these ultra-expensive homes is not known—but it is immediately obvious that they involve some objective beyond adequate housing.

Too frequently the size of the investment in a residence is governed by the monthly mortgage payments. If the payment can be supported, the cost is often disregarded or considered inconsequential. Rarely does the prospective buyer measure the true and complete cost of a *luxury house* in comparison to an *adequate* home.

FINANCIAL ASPECTS

In an effort to measure this cost, we recently studied the financial aspects of owning homes at various price levels. In the following example, we have assumed that our client is in a 40 per cent top tax bracket and is considering the purchase of one of three homes—one costing $35,000; one costing $50,000; and one costing $70,000. He has $15,000 cash for equity.

	House A	House B	House C
Total Cost	$ 35,000	$ 50,000	$ 70,000
Cash for Equity	15,000	15,000	15,000
Mortgage Balance	$ 20,000	$ 35,000	$ 55,000
Monthly Mortgage Payment (20 year, 6% mortgage)	$ 143.29	$ 250.76	$ 394.10

At this point, the Doctor feels he can support the $394.10 monthly payment but wonders what other factors may be involved:

	Estimated Annual Difference House B Over House A	Estimated Annual Difference House C Over House A
Annual Mortgage Payment	+$1,300	+$3,000
Additional Property Taxes	+ 400	+ 1,200
Additional Maintenance	+ 100	+ 500
Estimated Annual Difference —20 years	+$1,800	+$4,700

Here we discover that House B will require about $150 per month in cash outlay over House A; House C will require nearly $400 more per month. These differences do not even consider additional and more expensive furniture, additional domestic help and the inevitable increase in the overall cost of living which accompanies the luxury home.

The Doctor is impressed at this point—but our comparison has only begun. What would this monthly difference amount to if invested wisely in a productive medium?

FURTHER COMPARISON

In House B, the cost differential was $1,800 per year; however, this includes interest and taxes which are deductible and result in tax savings. The after-tax difference is $1,425 per year. If this amount were invested to yield and appreciate at 6 per cent, the net after-tax performance would be about 3½ per cent and this would accumulate to $43,500 over the 20-year mortgage period.

In House C, the cost differential was $4,700 before tax, or $3,700 *after tax*. This invested under the same circumstances as previously stated would grow to $104,000 over the 20-year period.

If we were to make a very liberal assumption that these homes would retain their original cost differential, the loss from purchasing House B over House A would be $43,500 less $15,000, cost differential, or a *net loss* of $28,500. The loss on

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

House C would be $104,000 less $35,000, cost differential, or a *net loss* of $69,000.

Extending the period of ownership from 20 years to 30 years would increase the net loss on House B to about $50,000 and the net loss on House C to about $130,000. These figures give dramatic emphasis to our contention that excessive expenditure on a residence can have permanent and serious results in terms of achieving a reasonable degree of financial security. These figures also point out the logic of measuring the long-term effect of an excessive residential commitment—as compared to the trend toward measuring the size of the commitment in terms of ability to meet the monthly mortgage payment.

SPECIFIC CIRCUMSTANCES

While there are advocates of various "rules of thumb" for measuring the amount which should be invested in a home, we believe that this determination can be made only on the basis of a study of the individual's specific financial circumstances. For example, a doctor earning $30,000 might have debt and family circumstances which should limit his home cost to $25,000, while another earning $30,000, having just inherited $100,000, could reasonably spend $50,000.

In the absence of unusually favorable circumstances, such as sizeable inheritance or outstanding past investment success, or various *adverse* circumstances, such as bad health or heavy liabilities, the following guide is probably reasonable for the *average* doctor.

Annual Income Before Taxes	Reasonable Value for Residence	Maximum Mortgage
$ 20,000	$25,000	$20,000
30,000	30,000	20,000
40,000	35,000	25,000
50,000	40,000	25,000
60,000	45,000	25,000
70,000	50,000	30,000
80,000	55,000	30,000
90,000	60,000	30,000
150,000	75,000	35,000

In addition to the value of the residence, the matter of maximum mortgage is quite important. The further you advance into luxury-type homes, the greater the ratio of equity to debt should be. This is based upon our philosophy of purchasing luxuries with *previously accumulated funds* rather than purchasing them with *future earnings*. Following this guide for total cost and maximum mortgage will also insure an adequate residue of funds for use in accumulating income-producing assets.

In summary, it has been our experience that over-commitment for a residence can cause more financial problems than any other single phase of your financial planning. In considering a residence purchase, all factors must be considered objectively and the final decision must be based upon financial logic rather than pure desire. Once a final decision has been made, you are going to have to live with it for many years.

Book Reviews

(Continued from page 962)

library of a general physician.—*C. S. Crusinberry,* M.D.

BLOOD DISEASES OF INFANCY AND CHILDHOOD, by *Carl H. Smith,* M.A., M.D. (St. Louis, C. V. Mosby Company, 1966, $22.00).

This second edition of Dr. Smith's book has been extensively revised and new material added to make it as current as any textbook can be.

There are 27 chapters covering in detail all known hematological disorders in infants and children. The author, Dr. Smith, is a recognized authority on pediatric hematology and he has spared no effort to make his book as accurate, informative and as useful as possible. Illustrations are generous (85) and excellent.

Generalists, pediatricians, house staffs of hospitals, medical students and laboratory technologists will find this book the best source available for information on hematological disorders in infants and children.

In the reviewer's opinion it merits top rating.—*Lee Forrest Hill,* M.D.

BOOKS RECEIVED

PROGRESS IN CLINICAL PATHOLOGY, edited by *Mario Stefanini,* M.D. (New York, Grune & Stratton, Inc., 1966, $23.75.)

MODERN TREATMENT, Vol. 3, No. 3, TREATMENT OF ALCOHOLISM, edited by *Marvin A. Block,* M.D., TREATMENT OF ARTERIOSCLEROTIC HEART DISEASE, edited by *Arthur C. DeGraff,* M.D., and *Solomon Fisch,* M.D., Ph.D. (New York, Hoeber Medical Division, 1966, $16.00 per year).

HAND SURGERY, by *J. Edward Flynn,* M.D. (Baltimore, The Williams & Wilkins Company, 1966, $38.50).

PULMONARY DISEASES AND ANOMALIES OF INFANCY AND CHILDHOOD, by *Milton I. Levin,* M.D. and *Armond V. Mascia,* M.D. (New York, Hoeber Medical Division, 1966, $12.00).

OPERABLE HEART DISEASE, by *Howard D. Sirak,* M.D. (St. Louis, C. V. Mosby Company, 1966, $12.50).

ARTERIOGRAPHY *PRINCIPLES AND TECHNIQUES,* by *Joseph L. Curry,* M.D., and *Willard J. Howland,* M.D. (Philadelphia, W. B. Saunders, 1966, $14.00).

RESUSCITATION OF THE NEWBORN INFANT, edited by *Harold Abramson,* A.M., M.D. (St. Louis, C. V. Mosby Company, 1966, $16.50).

SYNOPSIS OF NEUROLOGY, by *Francis M. Forster,* B.S., M.D. (St. Louis, C. V. Mosby Company, 1966, $7.50).

ENCYCLOPEDIA FOR MEDICAL ASSISTANTS, edited by *Louis Brachman,* M.D. (Milwaukee, Cathedral Square Publishing Company, 1966).

Woman's Auxiliary News

From the President

The summer board meeting is history now, and your president hopes that each of you who attended returned home full of ideas and plans and have now decided upon the best approach to their fruition.

Each chairman has information from her national counterpart, and she is anxious to share it with all county organizations. Please contact your president or Society Headquarters at 1001 Grand Avenue, West Des Moines, 50265, for names of officers and or committee chairmen until the yearbooks are available.

The board listened with interest to Mr. William Alexander's discussion of AMPAC, and similarly to Mr. Eldon Huston and Mr. Kent Jerome as they reported on IMPAC. We urge each of you to support these two organizations with your time and energy as well as your dollars.

Looking back over August, did you relax a bit, have fun with your families, change your routine and do something unorthodox so that now you are ready to swing into action on every front? Auxiliary activities deserve a portion of your time, so be a cheerful doer when your officers call upon you for service.

MRS. RALPH E. HINES, *President*

AMA-ERF Fund Raising Projects

Note Paper

Playing Cards

Christmas Cards

Mrs. D. F. Crowley, Chairman

5225 Woodland Avenue, Des Moines 50312

or

Woman's Auxiliary Office

1001 Grand Avenue, West Des Moines 50265

New Editors For Auxiliary News

Your new editors for the WOMAN'S AUXILIARY NEWS for the year 1966-67 will be Mrs. Robert (Justine) Foley, Editor and Mrs. Walter (Mary) Eidbo, Co-editor. This is a new venture for us and we hope that in the coming year we can make the AUXILIARY NEWS as interesting and informative as possible.

We would like to take this opportunity to thank our retiring editor, Mrs. J. F. (Erlene) Veverka, and Mrs. Hazel T. Lammey, Administrative Secretary to the Woman's Auxiliary of the Iowa Medical Society, for all the time they have given to us to help us to get off to a good start.

The following poem by Mrs. Veverka will help express some of our hopes and goals for the coming year.

Around the Hawkeye State

What's News?
Your meetings, plans and fun
Where they are and what is done.
Your idea, though only one,
Will inspire more than none!!
We want to hear much more from you.
We could, if you your part would do.
Please tell us when there's something new,
But mostly monthly meetings, too.

MRS. ROBERT (JUSTINE) FOLEY
1025-16th
West Des Moines, Iowa
MRS. WALTER (MARY) EIDBO
1415 Thompson Avenue
Des Moines, Iowa

Attention Fall Board Meeting

We, in Iowa, are already planning our workshop and making tentative plans to set it up with our fall Board meeting on October 25. We anticipate a brief business meeting lasting one hour, allowing the rest of the day for a workshop in which to really have a *working* and *learning* experience together. The Executive Committee meeting will be held the day before. We hope these plans sound as exciting and vital to you as they do to us.

Membership

Immediately following the Annual Convention in April, each Councilor was mailed:

1) Corrected Bylaws
2) Roster of Membership for 1964-1965
3) Stationery and envelopes
4) Membership

During June, I attended an IMPAC orientation meeting with Mrs. Olsen, Mrs. Ellis, Mrs. Lammey, Mr. Frank Woolley and several others. This was a most informative session which stressed political action at the local community level. You will be hearing more about this from others in the group.

I also wrote a member of the Des Moines County group suggesting a meeting during July or August to make final plans for reorganization and election of officers. There are now 26 paid members in Des Moines County and more will join later.

It was an exciting experience to be present for the filling and placing of the "Time Capsule" at the new IMS Headquarters Building on July 14, with officers of the Auxiliary and members of the Medical Society. Before the luncheon, Mrs. Merkel and I checked the MAL cards for final report of the 1965-1966 Roster.

Each Councilor was sent a card on July 19 asking that she exert special effort to attend the Executive Board meeting on July 25 in order that we might have an hour or so briefing on membership listings, etc., for the coming year. In preparation for this meeting I typed a list of all 1965-1966 MAL's by county and by district.

MRS. JAMES F. BISHOP
First Vice President

Community Service Programs

Two Auxiliary umbrella projects relating to the health problems and needs of children and youth and direct services for the homebound and elderly will enable auxiliaries across the country to join together in focusing attention on national health concerns and to make, at the community level, a tangible contribution to their solution. These projects will provide a concerted and dimensional approach to areas of major health concern and at the same time allow each individual auxiliary to emphasize the facet particularly pertinent in its community.

Under the umbrella project "Health of Children and Youth of School Age," seven package programs have been developed to bring problems and needs to public attention. Under the direct service umbrella, Homemaker Service, Meals-on-Wheels, Friendly Visitor Volunteer, and mental health and legislative interpretation programs will provide an understanding of the needs of the homebound and elderly.

Community service will assume the coordinating role in the development of the projects and programs and for related topics associated with them. Thus, without detracting from the autonomy of individual committees, activities can be developed to compliment or augment the basic goal.

Package programs developed by the Community Service Committee are:

Venereal Disease Control: Two "Package Programs" available. Program "A" is designed to bring to public attention the alarming increase in teenage venereal disease. It presents a visual understanding of contributory causes, teen-agers, par-

1966-67 OFFICERS

From left to right: Mrs. Byron M. Merkel, Des Moines, Treasurer; Mrs. Leland Prewitt, Ottumwa, Recording Secretary; Mrs. Daniel Coughlan, Des Moines, 2nd Vice President; Mrs. Ralph E. Hines, Des Moines, President; Mrs. Max E. Olsen, Minden, President-Elect; Mrs. James F. Bishop, Davenport, 1st Vice President.

ents and community responsibilities in venereal disease control, and the role of venereal disease education as the most effective method of preventing and controlling venereal disease. Program "B" is an educational program on venereal disease for youth groups. It identifies early signs and symptoms of venereal disease, and shows how the disease invades the body and its course of destruction if not adequately treated. The teen-ager is shown the consequences of promiscuous behavior and the need for individual and community responsibility in venereal disease eradication.

Immunization: This program provides factual information on immunization requirements and technics and it stresses the importance of preventive medicine in achieving and maintaining good health.

Developing Good Health Habits: This program demonstrates the value of health education to the physical, mental, and social well-being of our children and youth. It encourages public understanding of the importance of good school health education programs and emphasizes the role of the school and community health council. It includes resource material for specific health education areas, e.g., sex education, athletic injuries, teen-age drinking and nutrition.

The Community Service "Package Programs," each contain a selected film source list; a question and answer sheet, a fact sheet and a pertinent sample pamphlet for audience use; a paper prepared by an M.D. which can be read by the program moderator when a speaker is not available, and a procedure guide for program use by auxiliaries at auxiliary sponsored public education programs. They can be ordered from: Woman's Auxiliary to the AMA, 535 North Dearborn Street, Chicago, Illinois 60610. Specify by title the "Package Program" you wish sent and include the name of the auxiliary and name and address of person to whom the program is to be sent.

Other package programs for "Health of Children and Youth of School Age" are: Mental Health, Health Careers, Block Mother Plan, and GEMS.

Let Us Know Your Needs: The Community Service committee will help you develop a health education program for a demonstrated youth health need or problem in your community. Contact chairmen of designated committees for assistance in investigating and establishing needed community services to the homebound and elderly. We are all able and ready to help you to make your community a better place in which to live.

MRS. HOWARD ELLIS
Chairman, Community Service
Woman's Auxiliary to the AMA

The PACs

Mr. William Alexander in his talk *The Place of Women in the PAC Movement* presented at the July Board Meeting, gave a brief account of AMPAC and its goals. He discussed the importance of the role of women in politics. In the last national election, he pointed out there were four million more women as registered voters than men. In the next national election it is anticipated that four and one-half million more women will vote than men. He declared that women can do a lot through participation in political education activities. They can gather vital statistical data and put them to effective use.

The following working projects were examples given:

1. Door to Door election drives. (Motto: Get out *our* vote, not *the* vote.).
2. Telephone bank operation for a specific candidate.
3. Coffees, teas, etc.
4. Letter writing campaigns.

MRS. J. F. VEVERKA

NEWLY ELECTED DISTRICT COUNCILORS

From left to right: Mrs. John B. Dixon, Mason City, District II; Mrs. Charles W. Graham, Spirit Lake, District III; Mrs. Yme Sloterdyk, Knoxville, District IX; Mrs. Leonard H. Boggs, Sioux City, District IV; Mrs. Milton F. Kiesau, Postville, District I; Mrs. Joseph F. Veverka, Prairie City, District VI; Mrs. Charles B. Preacher, Davenport, District VIII.

News From Around The Hawkeye State

Marion County

The Marion County Medical Auxiliary, consisting of 22 members, will meet once a month starting in October and continuing through April. Early this fall the Auxiliary will initiate a Nurses' Loan Fund in cooperation with the Medical Society and the County Nurse.

Our Auxiliary plans to help with the school immunization clinics again this year, and we plan to send contributions to AMA-ERF and HELF.

Each year in December the Medical Society entertains the Auxiliary at a Christmas Party. An outstanding guest speaker is traditionally secured for this event.

On Doctor's Day in March, the Auxiliary will honor the doctors of the Marion County Medical Society.

Our goal again for the 1966-67 year will be to assist the Medical Society in every way possible.

MRS. C. R. BURROUGHS, *President*

Polk County

This year we will attempt to coordinate our projects under the Umbrella Plan, a program originated at the national level. A research study group appointed by the President, reviewed the Umbrella Plan and chose to study and direct information into our community on Venereal Disease, one facet of the plan. The Polk County Medical Society has sanctioned our plan and the Auxiliary's Mental Health, Disaster Preparedness, and Rural Health Committees are working jointly with the doctors in Polk County to carry out this project.

To the best of our ability, we will coordinate the following projects under the youth-orientated Umbrella Plan: Foreign Student Week-end, Homebound Handcraft Sale, Practical Nurses, Homemaker's Service, Vision Screening, Volunteer Health Service Award, Christmas Card Project, and Health Career Clubs.

In Doctor's Day we will again honor our homebound doctors with a personal call in tribute to their long years of service. In the Foreign Student area it is our plan to serve these young people throughout the year with particular effort being exerted at the time of Foreign Student Weekend.

On February 8, members of the Polk County Medical Auxiliary will be hostesses to the legislative wives at a Continental Breakfast at the new Iowa Medical Society Headquarters Building. The topic of the program that day will be "The Good Ship Hope." The Volunteer Health Service Award will be given on this morning of February 8.

The tentative schedule of monthly programs of our Auxiliary includes the following: Frank Miller, well-known Des Moines REGISTER AND TRIBUNE cartoonist, will present a program on Politics; Two panel programs on Sex Problems of Youth, one to pose the problems, and the other to offer possible solutions to these problems; and a May musical program to culminate our year.

Guests are welcome at all of our meetings, so the welcome mat is out to any who may be able to attend. We extend a special invitation to our Councilor, Mrs. Coey Schacht of Fort Dodge.

The following community social agency committees will include representatives of the Auxiliary: Homebound Recreation, Health Division, Mental Health, Housing, and the Settlement House Committee. We plan to cooperate in supplying members to serve on committees of the Council of Social Agencies.

It is an interesting and a most challenging experience to be working with such a creative, personable, and intelligent group of women who comprise the Polk County Medical Auxiliary.

MRS. O. A. ELLIOTT, *President*

Scott County

This summer members of the Auxiliary manned a booth at the Scott County Fair. Members of the Medical Explorer Post joined with our Auxiliary to provide booth attendants at an exhibit sponsored by the Scott County Medical Society.

We will have our new roster and a newsletter ready for distribution to all members in August. This is to spark interest for the coming year and to give the members a chance to put our dates on their calendars.

Some interesting programs are in the planning. At the risk of going international we hope to have one on medicine in Mexico by one of our members who is a native of Mexico City. Also scheduled is a program by Dr. James Bishop and Mr. Henry Hook on their trip to South Africa.

Our official representative to the Homemaker Service will be Mrs. Barbara Foley who did a fine job on Community Service this last year. We are hoping for a membership increase, and further we hope to increase our interest in AMA-ERF with Mrs. Dan Bovenmeyer as our chairman. The year 1966-67 should be one of learning for me and a busy year for all of us in Scott County.

MRS. R. M. PERKINS, *President*

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

Most of my patients with
igh blood pressure are
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akfast.
ntraindications: History of mental
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es of severe renal or hepatic diseases.
rning: Discontinue 2 weeks before
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ies, or bronchial asthma.
effects: Nausea, vomiting, diarrhea,
cle cramps, headaches and dizziness.
ential side effects include angina pecto-
anxiety, depression, drowsiness,
erglycemia, hyperuricemia, lassitude,
kopenia, nasal stuffiness, nightmare,
pura, urticaria, and weakness.
full details, see the complete prescrib-
information.
ilability: Bottles of 100 and 1000 tablets.
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BLUE SHIELD:
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LIBERTY BUILDING DES MOINES, IOWA

Personals

Dr. Dean Nierling has joined his father, **Dr. Paul A. Nierling,** of Cresco, in the practice of medicine, having just recently completed a residency in general surgery and neurosurgery at the University of Missouri School of Medicine. He is a 1960 graduate of the U. of I. College of Medicine and served in the Air Force from October 1961 to June 1963. Dr. Nierling is associated with his father and **Dr. F. L. Klingle** at the Medical Arts Center in Cresco, and he is assuming the practice of **Dr. Harold E. Bergee.** Dr. Bergee is leaving on September 15 to take a three year residency in radiology at the U. of I. College of Medicine. He has practiced in Cresco since February 1963.

Dr. Dayrle N. Crabb, of Denison, was one of seven men appointed to serve on the Federal Aviation Agency's 12-member Medical Advisory Panel, which reviews airman petitions for exemptions from the Agency's medical standards. As a member of the panel, Dr. Crabb will spend two days each month in Washington, D. C., reviewing cases. During the past year Dr. Crabb has been national president of the Flying Physicians Association. His term of office concludes in September, at which time he will become an ex-officio member of its Board.

Dr. James V. Prouty, a radiologist in Cedar Rapids for the past 30 years, retired from active practice July 1. He will continue to make his home in Cepar Rapids but he and Mrs. Prouty are looking forward to a great deal of traveling. Following Dr. Prouty's retirement, **Dr. John B. Titmarsh** joined the radiological group. Dr. Titmarsh is a 1957 graduate of the Bowman Gray School of Medicine of Wake Forest College.

Dr. Stanley W. Greenwald has become associated with **Dr. Lowell A. Luhman,** of Iowa City, in the practice of obstetrics and gynecology. Dr. Greenwald was graduated in 1959 from the U. of I. College of Medicine, and has just recently completed a residency in obstetrics and gynecology there. He interned at Broadlawns Hospital in Des Moines, and then served two years in the Air Force. In 1962-63 he had an endocrinology fellowship in obstetrics and gynecology at U.I.

Dr. Kenneth Monsma has returned to Pella to enter the practice of medicine with **Dr. Alvin E. Evers.** He is a 1955 graduate of Pella Christian High and was graduated in 1963 from the U. of I. College of Medicine.

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Complete psychiatric treatment in an environment for cure. A 50 bed hospital with the most modern diagnostic and therapeutic equipment for the treatment of nervous and mental disorders.

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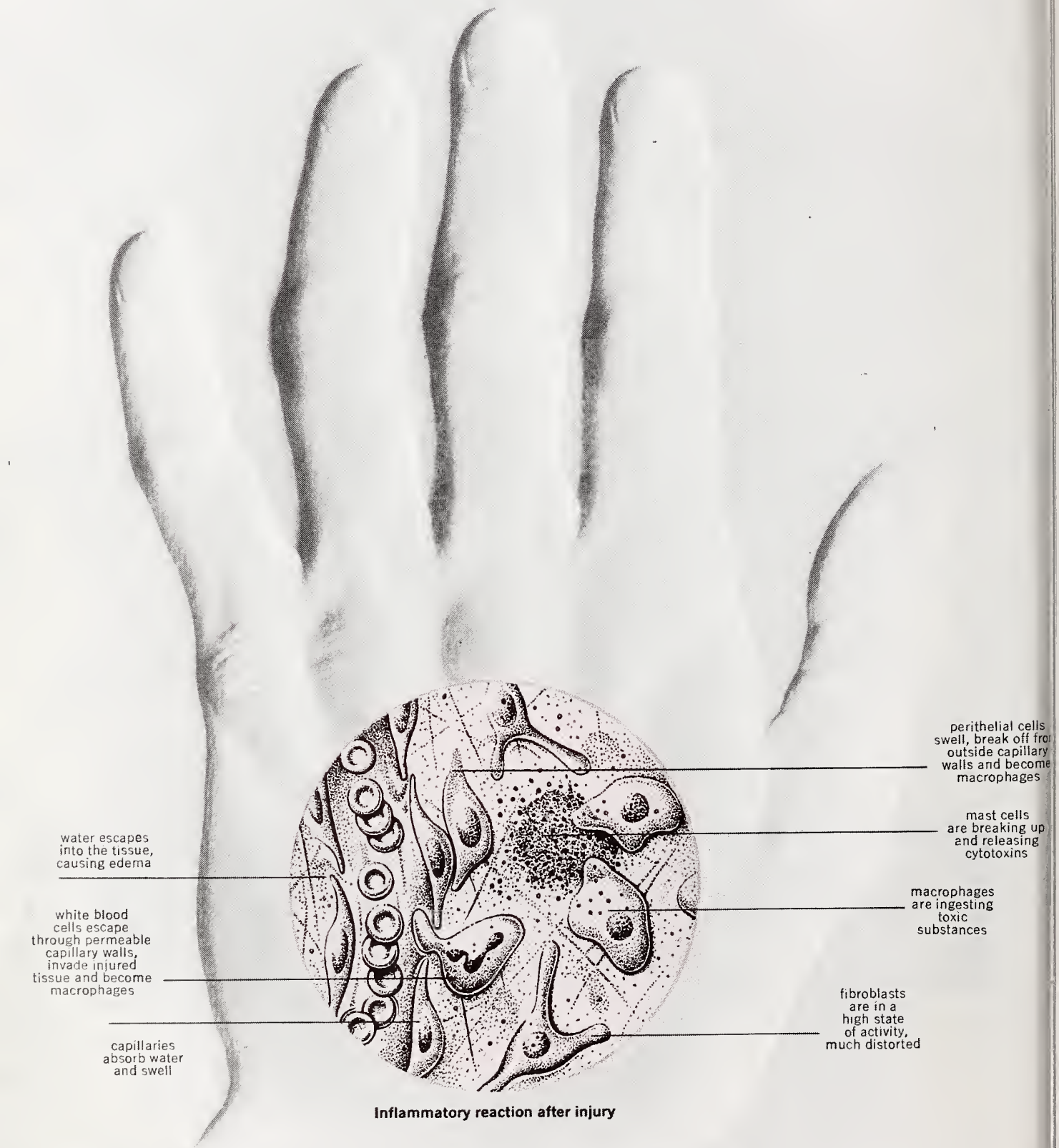

Inflammatory reaction after injury

*A New View of Corticosteriod Action in Inflammatory Dermatoses

A 16 mm. film utilizing time-phase cinemicrographic techniques. Available for showing on request to Syntex Laboratories.

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Contraindications: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. The neomycin in Neo-Synalar Cream rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

References: 1. Kanee, B.: Canad Med Ass J 88:999 (May 18) 1963. 2. Scholtz, J. R.: Calf Med 95:224 (Oct.) 1961. 3. Jansen, G. T., Dillaha, C. J., and Honeycutt, W. M.: Arch Derm 92:283 (Sept.) 1965.

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Three physicians from the U. of I. Department of Ophthalmology attended the International Congress of Ophthalmology in Munich, Germany, on August 12. All three—**Drs. Alson E Braley, Hermann M. Burian** and **Frederick C. Blodi**—planned to spend most of August attending meetings and visiting hospitals and laboratories in Europe.

A recent addition to the medical staff at the Mental Health Institute in Mount Pleasant is **Dr. Jose E. Delgado,** a native of Cuba. Dr. Delgado was graduated in 1939 from the Medical School of the University of Havana, taking his internship and residency at the Army Hospital in Havana.

Dr. Erwin Wittenberg has recently entered the practice of medicine in Newton, where he is associated with the Newton Clinic. Dr. Wittenberg is a 1963 graduate of the U. of I. College of Medicine.

Mr. Donald L. Taylor, executive vice president of the Iowa Medical Society, is chairman of a newly created liaison committee of the national Medical Society Executives Association and the American Medical Association. The purpose of this committee is to strengthen communications between the AMA staff and the staffs of the specialty, state and county medical societies. Mr. Taylor is a past president (1962-63) of the Medical Society Executives Association.

Dr. Walter A. Pribe has joined the staff of the Kersten Clinic in Fort Dodge where he will specialize in the practice of urology. Dr. Pribe was graduated in 1959 from the Bowman Gray School of Medicine of Wake Forest College. He has just completed his military service, moving to Fort Dodge from Fort Riley, Kansas, where he was chief of urological surgery at Irwin Army Hospital.

On July 1 **John E. Goodrich,** D.D.S., M.P.H., assumed the duties of director of the Dental Health Division of the Iowa State Department of Health. **Dr. Charles H. Henshaw** retired after 15 years of service. Also effective July 1 the official designation of the division was changed from Division of Dental Hygiene to the Dental Health Division.

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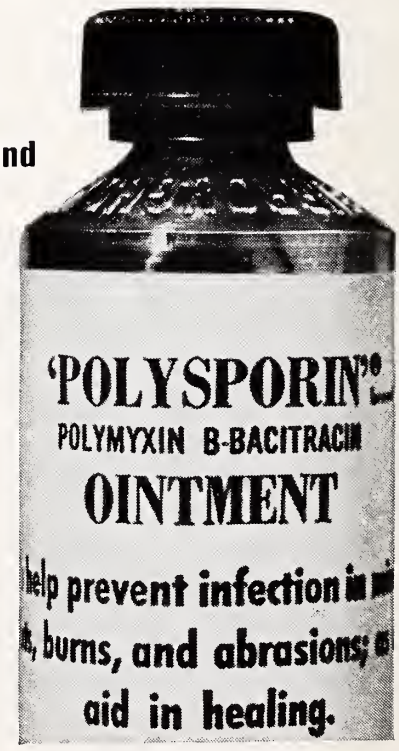

Recent physician participants and their topics in the radio program "Doctors House Call" on WOI, Ames, 3:05-3:30 Wednesday afternoons, were: August 3, "Immunization," **Dr. Ralph H. Heeren,** Des Moines; August 10, "Ulcers," **Dr. Ralph M. Brugger,** Ames; August 17, "Diagnostic Radiology and Radiation Therapy," **Dr. David C. Altine,** Ames; August 24, "Cancer in Children," **Dr. Charles J. Baker,** Fort Dodge; and August 31, "Cataracts," **Dr. Wendell A. Johnson,** Ames.

Dr. Roy M. Conmey, of Sergeant Bluff, was honored at an open house in his home Sunday, August 14, before leaving for southern California to make his home with a daughter. Dr. Conmey, a Life Member of the Iowa Medical Society, retired last spring after practicing medicine in Sergeant Bluff for 60 years.

Dr. William D. Paul, of Iowa City, addressed more than 400 Iowa high school coaches and officials in Spirit Lake on Friday, August 12, the final day of a three-day coaching school and clinic sponsored by the Iowa High School Athletic Association.

Dr. and Mrs. W. F. Brinkman have returned to Pocahontas following a trip to Europe where they toured England, Norway, Sweden, Denmark and Germany.

Dr. Adolph L. Sahs, professor and head of neurology at the U. of I. Medical Center, has been appointed to a four-year term on the National Advisory Neurological Diseases and Blindness Council. The Council, composed of 12 persons who are prominent in science, education and public affairs, makes recommendations to the Surgeon General of the Public Health Service concerning research on neurological and sensory disorders.

William F. McCulloch, D.V.M., associate professor of agricultural medicine at the U. of I., has gone to Japan to participate in the 11th Pacific Science Congress at the University of Tokyo. Supported by a travel grant from the Pacific Science Board of the National Research Council of the National Academy of Science, Dr. McCulloch will present a paper titled, "Toxoplasmosis Studies in Iowa, 1960-65." Dr. McCulloch plans to spend several weeks in Japan, during which he will visit several research institutes.

Two new physicians have joined the staff of the McFarland Clinic in Ames. **Dr. Charles M. Blackburn** is a 1944 graduate of Duke University School of Medicine. He was instructor and assistant professor on the University of Minnesota staff at the Mayo Clinic from 1949-1965, and was at the same time a member of the internal medicine consulting staff, serving as head of the clinical oncology section from 1962-1965. **Dr. LeRoy L. Johnson** was graduated from the University of Kansas School of Medicine in 1956. He took his internship and residency at the University of Pennsylvania School of Medicine and served as assistant instructor in surgery there until 1962. Prior to locating in Ames, he was chief of surgery at the U. S. Navy Station Hospital, Rota, Spain.

Dr. George M. Malouf, who has been in practice in Marcus since last December, is moving to Sioux Rapids where he will be located in the offices formerly occupied by **Dr. R. J. Mattice.**

Upon completion of his residency in radiology at the U. of I. College of Medicine in June, **Dr. Byron M. Peterson** moved to Keokuk where he is associated with **Dr. L. C. Pumphrey** in the practice of radiology. Dr. Peterson practiced in Mount Pleasant from 1958 to 1963 when he started his residency in radiology.

Dr. Roland L. Langley, of Sioux City, has been called into military service. He will spend a month in training in Texas, after which he will be stationed in California.

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Dr. John R. Jowett, who has been in the practice of medicine in Clinton for the past 38 years, has recently retired and moved to Lantana, Florida.

Word has been received from the Johnson County Medical Society that the following members from Iowa City have gone into military service: **Drs. James W. Elliott, Denis D. Faber, Lowell A. Luhman, Thomas R. Nicknish, Thomas F. Purdon** and **William Stanford.**

Barry J. Anson, Ph.D., research professor of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, was one of 10 guest lecturers at the Fifth Annual Workshop in Medical Audiology sponsored by the University of Colorado School of Medicine August 15-19. Dr. Anson spoke on the surgical anatomy of the ear and temporal bone.

Dr. Otis D. Wolfe, of Marshalltown, appeared on the program of the opening session of the AMA Public Relations Institute held at the Drake Hotel in Chicago, August 25-26. Dr. Wolfe's topic was "Medicine's PR Problems."

The Polk County Medical Society has advised that **Dr. Joel M. Linford,** of Des Moines, was inducted into the U. S. Army on August 15, 1966. He has orders to report to Fort Leonard Wood on September 17, following a training period at Fort Sam Houston, Texas.

Dr. Jack King, who has been on the medical staff of the Atomic Energy Commission in Ames for the last four years, is moving to Camden, Arkansas, where he will enter the private practice of medicine with another physician of that community.

The Palo Alto County Medical Society and the County Nurses' Association recently presented the Palo Alto County Hospital, Emmetsburg, with a 16 mm. movie projector.

Dr. Carroll E. Sinnard, who just recently joined **Drs. James Coffey** and **Francis Conway** in the practice of medicine in Emmetsburg, has been called into military service.

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News has come to the JOURNAL office of recent honors bestowed upon two former faculty members at the U. of I. College of Medicine. **Dr. Stuart C. Cullen,** who joined the University of California Medical Center in 1958, has been appointed dean of the University of California School of Medicine. He had served as associate dean since 1963. **Dr. Kenneth M. Brinkhous,** who left Iowa in 1946 to become professor and chairman of pathology at the University of North Carolina Medical School, has been elected president of the Federation of American Societies for Experimental Biology. Six societies with a combined membership of 8,000 are affiliated with the Federation, which is headquartered in Washington, D. C.

The Zearing community honored **Dr. Louis L. Bowie** on August 7 with a special program in recognition of his more than 20 years of service to the community. The program climaxed an open house for Dr. and Mrs Bowie on the occasion of their sixtieth wedding anniversary.

Dr. Lee R. Akker has become associated in the practice of medicine with **Drs. C. D. Oelrich** and **T. E. Kiernan,** of Sioux Center. Dr. Akker was graduated in 1965 from the University of Illinois College of Medicine and has just completed his internship at Rockford Memorial Hospital in Rockford, Illinois.

Dr. M. A. Blackstone was elected president of the medical staff of the St. Luke's Medical Center at its initial meeting at St. Luke's Lutheran Hospital in Sioux City. Other officers elected by the staff members of the former St. Luke's Lutheran and St. Luke's Methodist Hospitals include: **Dr. D. B. Blume,** vice-president; **Dr. H. H. Parish,** secretary, and **Dr. J. A. McFarlane,** treasurer. Newly elected members of the joint conference committee of the board of directors are: **Dr. C. L. Beye, Dr. A. H. Kelly** and **Dr. D. J. Wagner.** All are of Sioux City.

Dr. James K. Stepp, of Manchester, closed his office on June 30. He is retiring after 55 years in the practice of medicine. In addition to his service in the community as a physician, Dr. Stepp has been an active member of the Manchester Lions Club and for many years was a member of the Iowa Conservation Commission. The first artificial lake in the state of Iowa was developed during Dr. Stepp's membership on the commission. The commission also promulgated the 25-year plan under

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which many artificial lakes were built in Iowa during his service. Dr. Stepp was made a Life Member of the Iowa Medical Society five years ago upon completion of 50 years of medical practice.

Dr. Harry F. Kiesling was honored on Sunday, August 28, by the residents of Lehigh for his many years of devoted service in that community. Dr. Kiesling began his practice in Lehigh in 1919. In April of this year he was made a Life Member of the Iowa Medical Society and received his Fifty Year Club pin. In June he was awarded a fifty-year medal from the U. of I. College of Medicine.

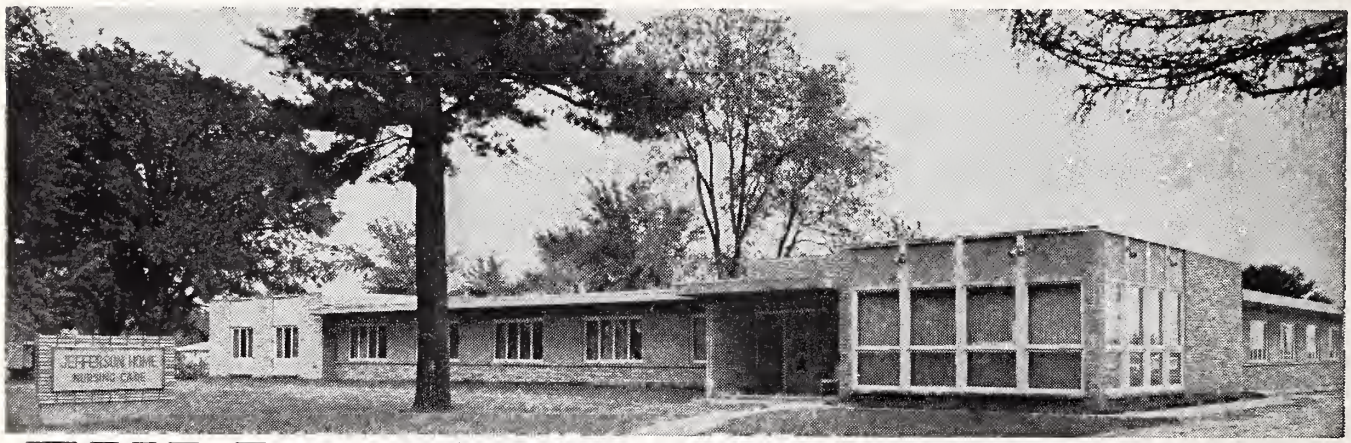
Deaths

Dr. Mark L. Floyd, 74, associate professor emeritus in the Department of Pediatrics at the U. of I. College of Medicine, died on July 17 at University Hospitals. He was graduated from the U. of I. College of Medicine in 1918 and returned to the university to become a member of the pediatric staff and College of Medicine faculty in 1920.

Dr. Enos D. Miller, 82, who had practiced in Wellman for 56 years, died in his sleep on August 21 at his home there. Dr. Miller was graduated from the U. of I. College of Medicine in 1910 and was a Life Member of the Iowa Medical Society.

Dr. Edward W. Thielen, 62, a Waterloo physician and surgeon for 37 years, died of a heart attack on August 17 at St. Francis Hospital in Waterloo.

Dr. Howard E. Thompson, 77, of Dubuque, died on July 31 at Finley Hospital. He had practiced in Dubuque from 1914 until his retirement in 1955. Dr. Thompson was a Life Member of the Iowa Medical Society.



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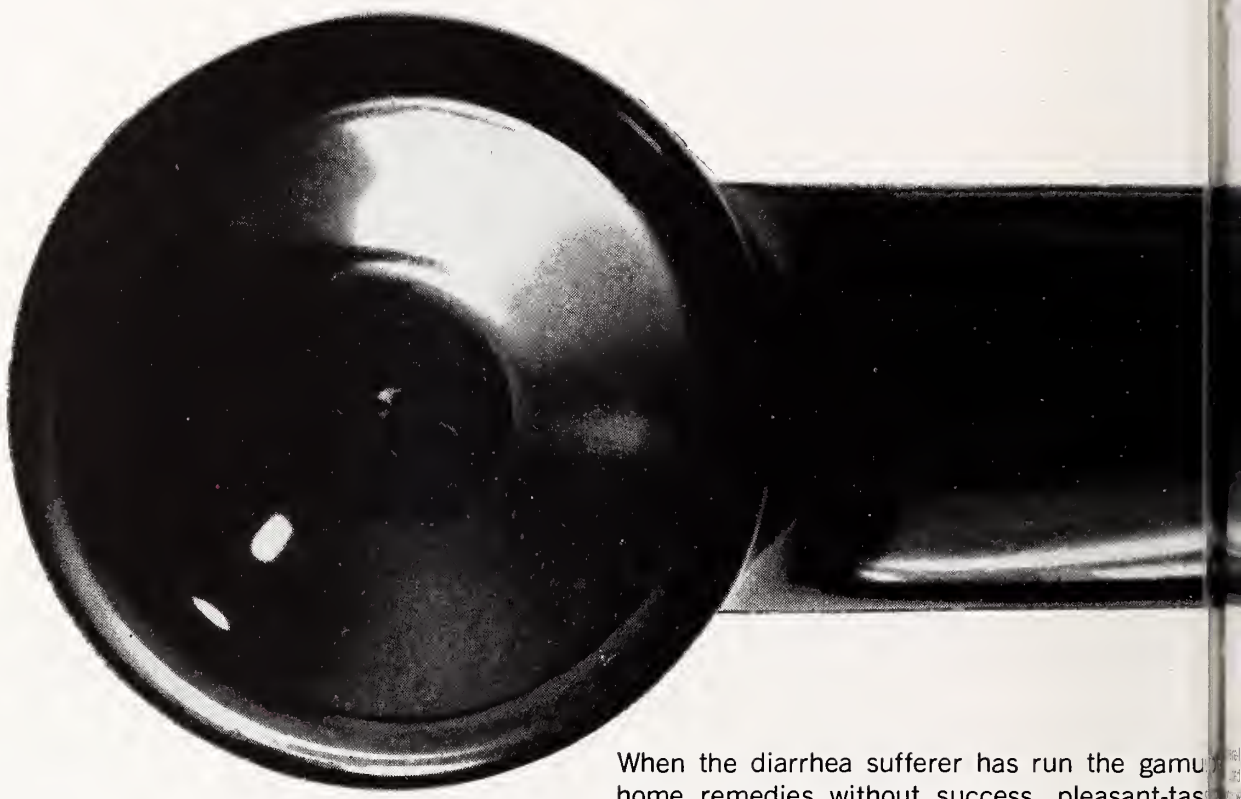

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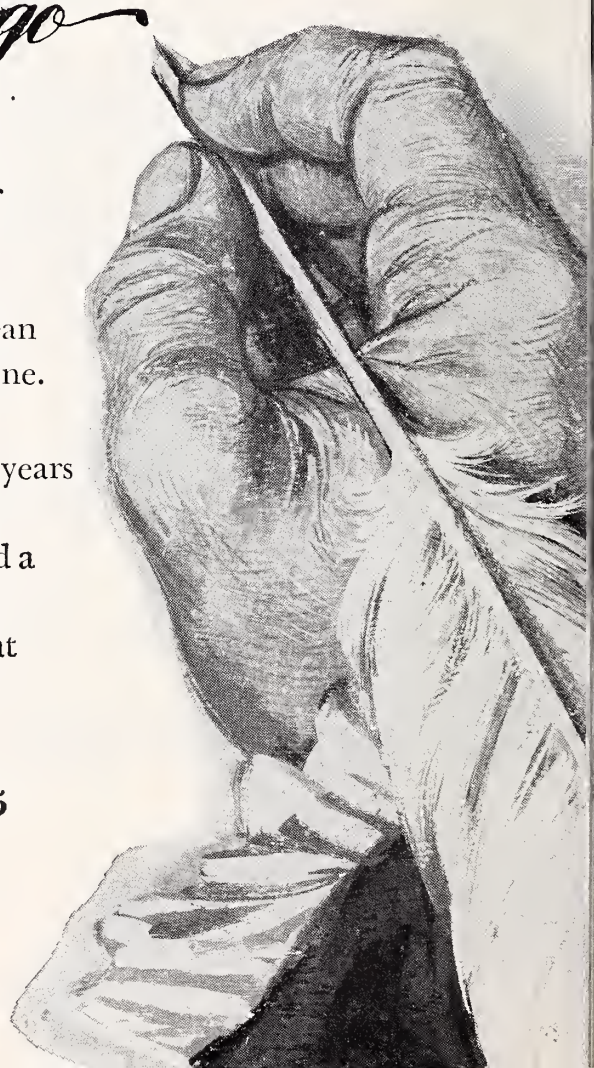

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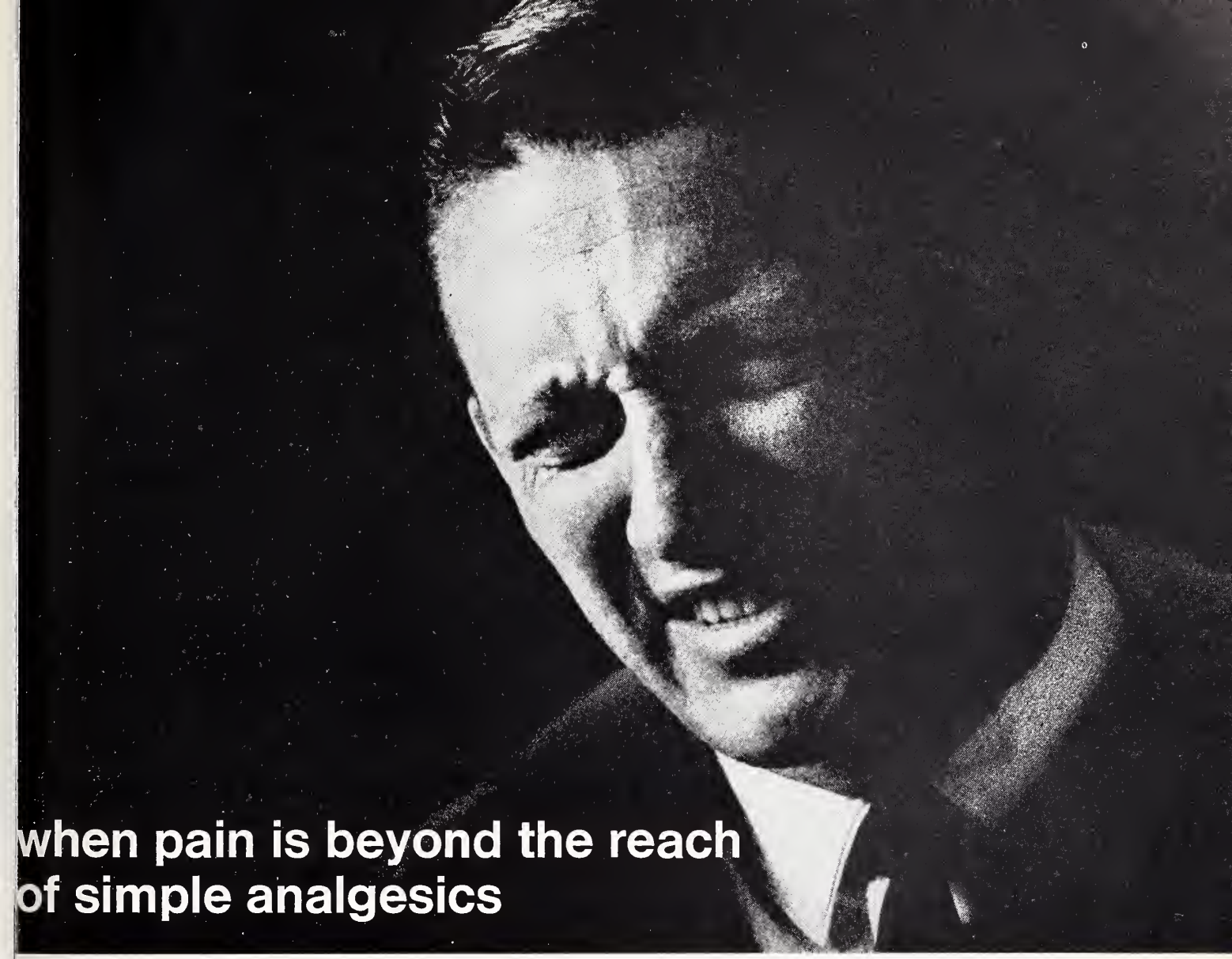

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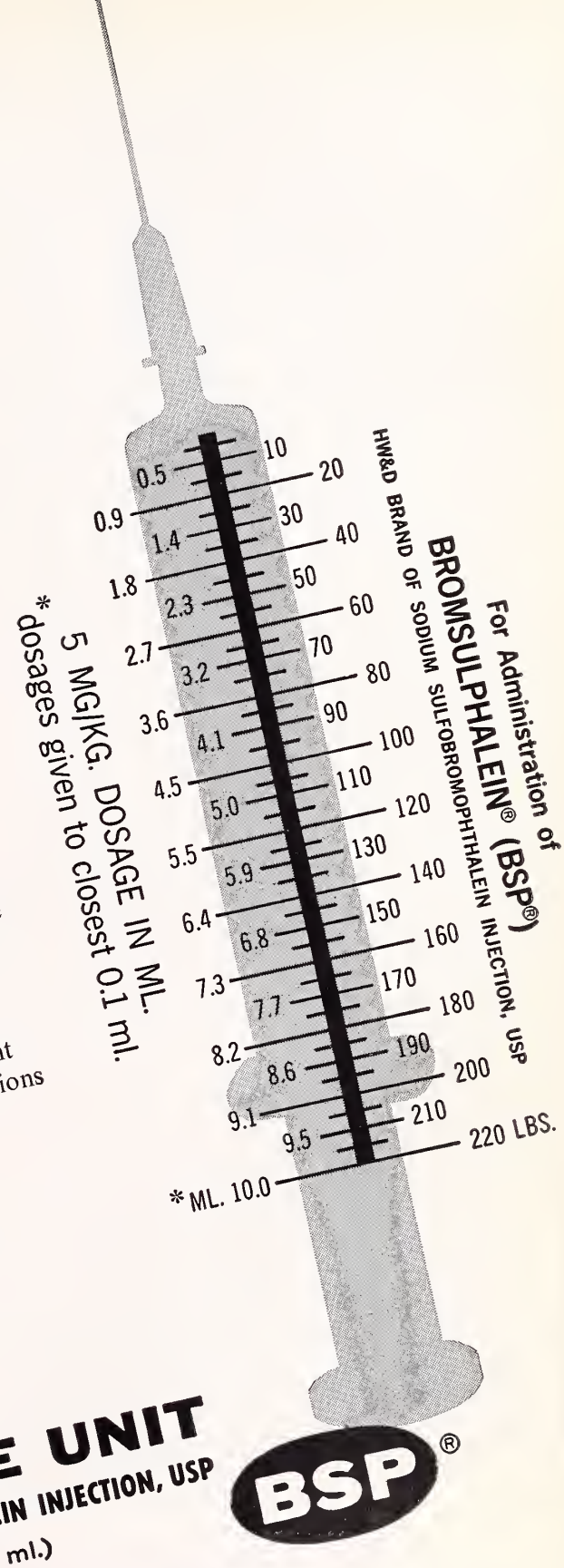

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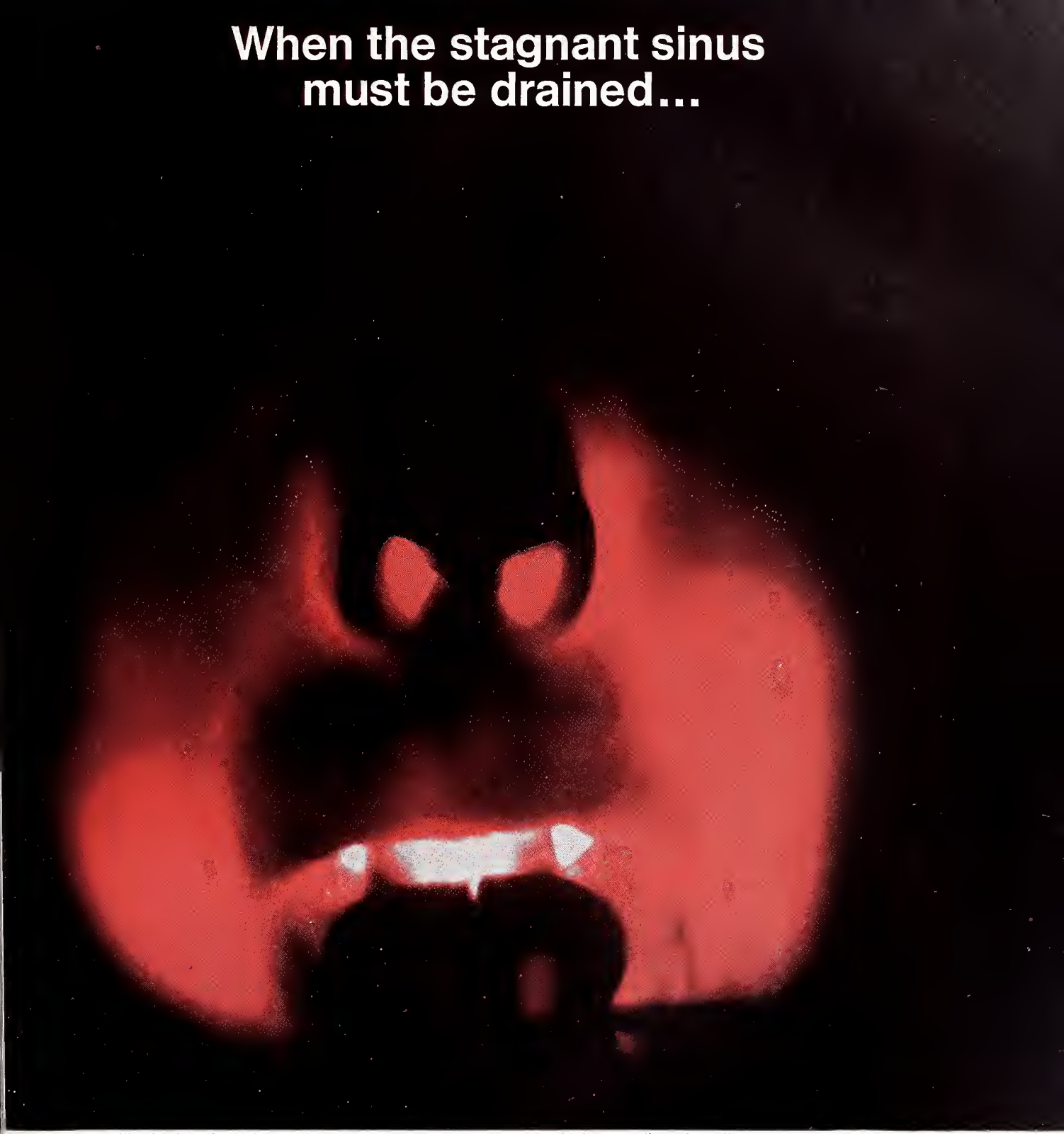

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But the committee said there are "possible theoretic risks" in the use of oral contraceptives. For this reason, the committee recommended further, extensive tests to learn more about possible side effects and to improve surveillance of the drugs.

The FDA accepted this proposal and other committee recommendations, including discontinuance of time limitations on use of oral contraceptives.

FDA Commissioner Dr. James Goddard said the agency would like to start studies on up to 50,000 women next year and eventually on as many as 500,000 women. The biggest drug studies thus far have involved only 20,000 or 30,000 women.

"The committee finds no adequate scientific data, at this time, proving these compounds unsafe for human use. It has nevertheless taken full cognizance of certain very infrequent but serious side-effects and of possible theoretic risks suggested by animal experimental data and by some of the metabolic changes in human beings," the committee concluded.

"In the final analysis, each physician must evaluate the advantages and the risks of this method of contraception in comparison with other available methods or with no contraception at all. He can do this wisely only when there is presented to him dispassionate scientific knowledge of the available data."

The FDA said it would lift shortly its recommended limits on use of the pill. The agency has required that manufacturers state on their labels and advise physicians that the oral contraceptives should be used by individuals for no more than four years because of concern about the unknown long-term effect of the medications. FDA officials and the advisory committee agreed there isn't any sound scientific rationale for the restriction, because of the current lack of data that would indicate that the pills are dangerous.

Other steps that FDA officials said would be taken as a result of the report include imposition of uniform labeling requirements on all types of oral contraceptives, elimination of product-by-product variations that have confused physicians and allowed companies to make different promotional claims, and restrictions of the use of the products for some medical purposes, such as prevention of abortion and treating lack of menstruation or painful menstruation, as well as conception control.

"The oral contraceptives present society with problems unique in the history of human therapeutics," the committee said. "Never will so many people have taken such potent drugs voluntarily over such a protracted period for an objective other than for the control of disease. These compounds, furthermore, furnish almost completely effective contraception, for the first time available to the medically indigent, as well as the socially privileged. These factors render the usual standards for safety and surveillance inadequate. Their necessary revision must be carefully planned and tested, lest the health and social benefits derived from these contraceptives be seriously reduced. Probably no substance, even common table salt, and certainly no effective drug can be taken over a long period of time without some risk, albeit minimal. There will always be a senstitive individual who may react adversely to any drug, and the oral contraceptives cannot be made free of such adverse potentials, which must be recognized and kept under continual surveillance. The potential dangers must also be carefully balanced against the health and social benefits that effective contraceptives provide for the individual woman and society.

"The oral contraceptives currently in use are probably not those that will be employed 10 or even five years hence. Drugs with even less potentially adverse effect, utilizable in smaller dosage, will undoubtedly be developed through continuing research."

* * *

The American Medical Association opposed legislation that would make prescribing drugs by generic name mandatory under the federal program of medical care for dependents of military personnel.

The AMA expressed its opposition in a letter to a joint House-Senate committee that was considering such legislation. The letter said:

"The generic name refers to the active chemical ingredient of the drug and not to the finished product which is supplied to the patient. In order that it may be dispensed, the tradename manufacturer, by way of a specific formulation, processes the drug to its final form. For example, included in a manufacturer's preparation of a tablet form of a drug may be a number of variables such as the

after surgery

B and C vitamins are therapy: Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS capsules, designed to meet increased metabolic demands, aid in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

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Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
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Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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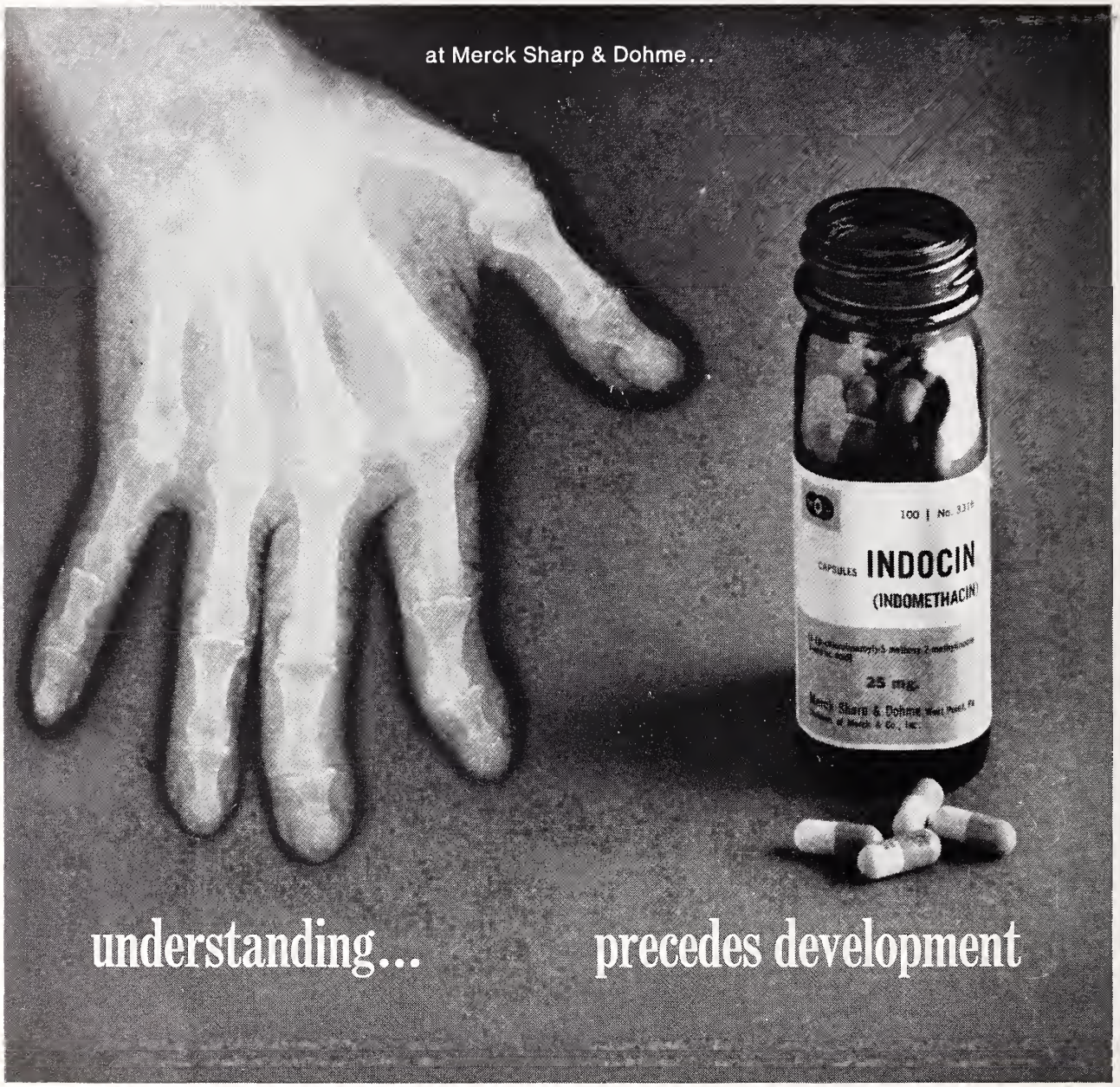

The synthesis of cortisone was accomplished by Merck Sharp & Dohme in 1948—the famous "Compound E" used by Dr. Philip Hench in his historic experiment at the Mayo Clinic.

But proud as we are of our role in the development of cortisone and subsequent corticosteroids, we have continued to seek a greater understanding of arthritic disorders and new drugs for their treatment.

One such drug—INDOCIN® (indomethacin), a nonsteroid, anti-inflammatory agent fundamentally different in structure and activity from other drugs in use—was recently made available for the treatment of arthritic conditions. It opens new possibilities for the long-term management of arthritis and inflammatory disease.

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INDOCIN®
INDOMETHACIN

Indications: Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.
Contraindications: Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.
Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.
Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity.
Before prescribing or administering, read product circular with package or available on request.

crystalline size, the nature of the excipients, the coloring agents and flavors, the tableting pressures, coating films, and the orientation within the tablet.

"Since the finished product, depending on who has manufactured it, may emerge in any one of several forms, it becomes apparent that a generic-named drug supplied by one manufacturer may differ to a significant degree from the same generic-named drug supplied by another manufacturer. Yet, if the physician is compelled to prescribe by generic name, he would have no control as to which drug is used by the pharmacist in filling the prescription.

"The coating, the disintegration time, the solubility, the choice of vehicle or base, these and other factors may be extremely impotant to the physician who chooses a drug for his patient. He must have the opportunity to specify that drug containing the variables he has found suitable to the treatment of his patient. Further, where his patient is receiving the same medication over a period of time, successive refills of the same prescription with products of different manufacturers, could lead to variations in therapeutic response which may mislead him.

"It has been suggested that generic prescribing would result in substantial savings. This may be true in some instances, but certainly not in all. Generic prescribing would allow the pharmacist to furnish the patient with that manufactured drug he, the pharmacist, has chosen. It may or may not be less expensive. In any event, it is the pharmacist who sets the final price.

"The argument of generic prescribing versus trade name prescribing has been heard at scientific gatherings, seen in scientific publications, and debated in the committees of Congress. But as to one element of the discussion, almost all physicians agree. For a variety of sound medical reasons, the choice of whether to prescribe generically or by brand name should be that of the treating physician. No law should be passed which may compel him to use in every case, a generic or non-proprietary drug. Such a law would not be in the best interest of his patient."

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Coming Meetings

IN STATE

Oct. 2-5 **8th Annual Medical Assistants In-Service Workshop,** University of Iowa, Iowa City.

Oct. 9 **Dedication of New IMS Headquarters Building,** West Des Moines

Oct. 15 **Mercy Hospital Medical Day,** Des Moines

Oct. 18-19 **Postgraduate Course in Religion and Medicine,** University of Iowa, Iowa City.

Oct. 21-22 **Postgraduate Course in Orthopedics,** University of Iowa College of Medicine, Iowa City.

Nov. 1-2 **Postgraduate Conference on Surgery, University of Iowa College of Medicine,** Iowa City.

Nov. 8-9 **Postgraduate Conference, Nursing Institute on the High-Risk Mother and Child, University of Iowa College of Medicine,** Iowa City.

Nov. 18-20 **Postgraduate Conference on Pediatrics-Radiology-Urology, University of Iowa College of Medicine,** Iowa City.

CONTINENTAL U. S.

Oct. 1-2 **International Conference on Pathology of Renal Diseases,** New York Medical College, New York City.

Oct. 1-5 **Annual Session, American Society of Anesthesiologists,** Sheraton Hotel, Philadelphia.

Oct. 1-7 **Annual Otolaryngologic Assembly of 1966,** Department of Otolaryngology, College of Medicine of the University of Illinois, Illinois Eye and Ear Infirmary, Medical Center, Chicago.

Oct. 3-5 **Hospital Medical Staff Conference,** University of Colorado School of Medicine, Estes Park, Colorado.

Oct. 3-5 **44th Annual Fall Clinical Conference, Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Missouri.

Oct. 3-7 **First IMR International Symposium, "Trace Characterization—Chemical and Physical," National Bureau of Standards,** Gaithersburg, Maryland.

Oct. 3-7 **Postgraduate Course, Care of the Critically Ill Medical Patient, American College of Physicians,** State University of New York College of Medicine, Syracuse.

Oct. 5 **Professional Medical Symposium, The Kidney Foundation of Illinois,** Sheraton-Chicago Hotel, Chicago.

Oct. 6-8 **Seminar on the Need for Medical Information Specialists,** YMCA Conference Center, Estes Park, Colorado.

Oct. 6-8 **American Association for Surgery of Trauma,** Santa Barbara Biltmore Hotel, Santa Barbara.

Oct. 6-8 **9th Annual Symposium, Radiologic Technology, University of Kansas School of Medicine,** Battenfeld Auditorium, Kansas City, Kansas.

Oct. 6-9 **American Electroencephalographic Society,** Denver Hilton, Denver.

Oct. 7-8 **American College of Physicians, Southeastern Regional Meeting,** Biloxi, Mississippi.

Oct. 7-8 **3rd National Congress on Medical Quackery,** sponsored by the **American Medical Association** and **National Health Council,** Pick-Congress Hotel, Chicago.

Oct. 7-14 **American Academy of General Practice,** War Memorial, Boston.

Oct. 10-12 **Indiana State Medical Association,** Sheraton Hotel, French Lick, Indiana.

Oct. 10-14 **52nd Annual Clinical Congress, American College of Surgeons, Civic Auditorium,** San Francisco.

Oct. 10-14 **Chemical and Biological Defense Training Course,** sponsored by the **U. S. Public Health Service,** Division of Health Mobilization, U. S. Army Chemical Center and School, Fort McClellan, Alabama.

Oct. 12 **Symposium on Management of the Chronic Disease Patient, "Hypertension,"** sponsored by the **U. S. Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Oct. 12 **Minnesota Academy of Medicine,** Town & Country Club, St. Paul.

Oct. 13-15 **American Thyroid Association,** The Drake, Chicago.

Oct. 13-15 **Association of American Physicians and Surgeons,** Disneyland Hotel, Disneyland, California.

Oct. 14-15 **Conference on Soft Tissue Trauma,** University of Missouri Medical Center, Medical Center Auditorium, Columbia.

Oct. 15 **American College of Physicians, District of Columbia-Maryland Regional Meeting,** Washington, D. C.

Oct. 15 **American College of Physicians, Montana-Wyoming Regional Meeting,** Great Falls, Montana.

Oct. 17-20 **51st Annual Scientific Assembly of Interstate Postgraduate Medical Association,** Sheraton-Park Hotel, Washington, D. C.

Oct. 18 **4th Physicians Seminar on Arthritis, Northeastern California Chapter Arthritis Foundation,** Sacramento.

Oct. 19-23 **10th Annual Meeting, American Association of Medical Assistants,** Chase-Park Plaza Hotel, St. Louis.

Oct. 20-22 **Central Association of Obstetricians and Gynecologists,** Broadwater Beach Hotel, Biloxi, Mississippi.

Oct. 22-27 **35th Annual Meeting, American Academy of Pediatrics,** Palmer House Hotel, Chicago.

Oct. 23-26 **American College of Gastroenterology,** Bellevue-Stratford Hotel, Philadelphia.

Oct. 24 **American Association of Poison Control Centers,** Palmer House, Chicago.

Oct. 25-26 **Medicine and Religion, University of Kansas Medical Center,** Battenfeld Auditorium, Kansas City, Kansas.

Oct. 25-28 **19th Annual Meeting of American Association of Blood Banks,** Los Angeles.

Oct. 26 **Symposium on Management of the Chronic Disease Patient, "Cerebral Palsy,"** sponsored by the **U. S. Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Oct. 26-28 **Theory and Application of Gas Chromatography in Industry and Medicine,** Hahnemann Medical College and Hospital, Marriott Motor Hotel, Philadelphia.

Oct. 27-29 **Postgraduate Course, Population Dynamics, Genetic Counseling and Birth Control,** University of Colorado School of Medicine, Denver.

Oct. 27-29 **Annual Postgraduate Course in Gastroenterology, American College of Gastroenterology,** Bellevue Stratford, Philadelphia.

Oct. 31-Nov. 12 **Postgraduate Course in Laryngology and Bronchoesophagology,** sponsored by **Department of Otolaryngology** of the **Illinois Eye and Ear Infirmary and the College of Medicine,** University of Illinois Medical Center, Chicago.

Nov. 2-3 **American College of Preventive Medicine,** San Francisco Hilton, San Francisco.

Nov. 2-4 **Postgraduate Course on Management of Fractures,** University of Colorado School of Medicine, Denver.

Nov. 2-5 **1966 Annual Meeting of the American Medical Women's Association, "Sexual Problems in Clinical Practice,"** International Inn, Washington, D. C.

Nov. 3 **American Association for the Study of Liver Diseases,** Sheraton Hotel, Chicago.

Nov. 4-5 **7th Annual MD-DAY, University of Missouri Medical Center,** Medical Center Auditorium, Columbia.

Nov. 5 **Annual Tumor Seminar, Minnesota Society of Clinical Pathologists,** Minnesota Club, St. Paul.

Nov. 6-9 **Medical Society of Virginia,** Williamsburg Lodge, Williamsburg.

Nov. 7-11 **Postgraduate Course on Endocrine and Metabolic Disorders, American College of Physicians,** Louria Auditorium, The Jewish Hospital of Brooklyn, Brooklyn.

Nov. 9 **Symposium on Management of the Chronic Disease Patient, "Low Back Pain,"** sponsored by **United States Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Nov. 9-11 **Tennessee Academy of General Practice, 18th Annual Scientific Assembly,** Gatlinburg Auditorium, Gatlinburg.

(Continued on page 1059)

when congestion is complicated by sulfa-susceptible bacterial invaders in the upper respiratory tract...

re-enforce your decongestant therapy

prescribe economical **Trisulfaminic®**

Each tablet contains: Triaminic® 25 mg. (phenylpropanolamine hydrochloride 12.5 mg., pheniramine maleate 6.25 mg., pyrilamine maleate 6.25 mg.); Trisulfapyrimidines, U.S.P. 0.5 Gm. (sulfadiazine 0.167 Gm., sulfamerazine 0.167 Gm., sulfamethazine 0.167 Gm.)

PHARMACOLOGY: Triaminic decongests and promotes drainage of nasal and paranasal passages, and prevents any further histamine-induced damage; the triple sulfonamides inhibit susceptible bacterial invaders. INDICATIONS: For congestion and infection of the upper respiratory tract caused by sulfa-susceptible organisms. DOSAGE: Adults: 2 to 4 tablets initially, followed by 2 tablets every 6 hours. Medication should be continued until patient has been afebrile for 3 days. ADVANTAGES: The advantages of Trisulfaminic in upper respiratory infections are: freedom from narcotics or alcohol; therapeutic reliability; safety; economy; ease of administration; freedom from potential sensitization to broad-spectrum antibiotics which may be reserved for lower respiratory or other infections caused by susceptible organisms. CONTRAINDICATIONS: Contraindicated in sulfonamide and antihistamine sensitivity, impaired renal function, pregnancy approaching term, and in premature infants and newborn infants during the first month of life. Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. WARNING: Use only after careful evaluation in patients with liver or renal damage, urinary obstruction, or blood dyscrasias. Deaths have been reported from hypersensitivity reactions with administration of sulfonamides. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed periodically. Sulfonamide therapy may potentiate the hypoglycemic action of sulfonylureas. PRECAUTIONS: Use with caution in patients with histories of significant allergy or asthma. Assure an adequate fluid intake. Because the antihistamines may cause drowsiness of varying degree, warn patients about activities requiring alertness such as driving a car or operating dangerous machinery. Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease and diabetes. ADVERSE REACTIONS: As in all sulfonamide therapy, the following reactions may occur: headache, nausea, vomiting, diarrhea, icterus, hepatitis, pancreatitis, urticaria, rash, fever, cyanosis, hematuria, crystalluria, proteinuria, blood dyscrasias, petechiae, purpura, neuropathy and injection of the conjunctiva and sclera. If one or more of these reactions occur, the drug should be discontinued. With antihistaminic therapy there have been reports of sedation varying from mild drowsiness to deep sleep, dizziness, lassitude, inability to concentrate, fatigue, incoordination, tinnitus, blurred vision, diplopia, euphoria, nervousness, insomnia, tremors, palpitation, hypotension, headache, chest tightness, urinary frequency, dysuria, tingling of the hands, dryness of the mouth, throat, and nose, gastrointestinal disturbances such as epigastric distress, anorexia, nausea, vomiting, constipation and diarrhea and very rarely, leukopenia and agranulocytosis. Adverse reactions reported with the use of sympathomimetic amines include anxiety, tension, restlessness, nervousness, tremor, weakness, insomnia, headache, palpitation, tachycardia, angina, elevation of blood pressure, sweating, mydriasis, anorexia, nausea, vomiting, dizziness, constipation, and dysuria due to vesicle sphincter spasm. PACKAGE INFORMATION: Trisulfaminic Tablets: Supplied in bottles of 100 tablets. CAUTION: Federal law prohibits dispensing without prescription.

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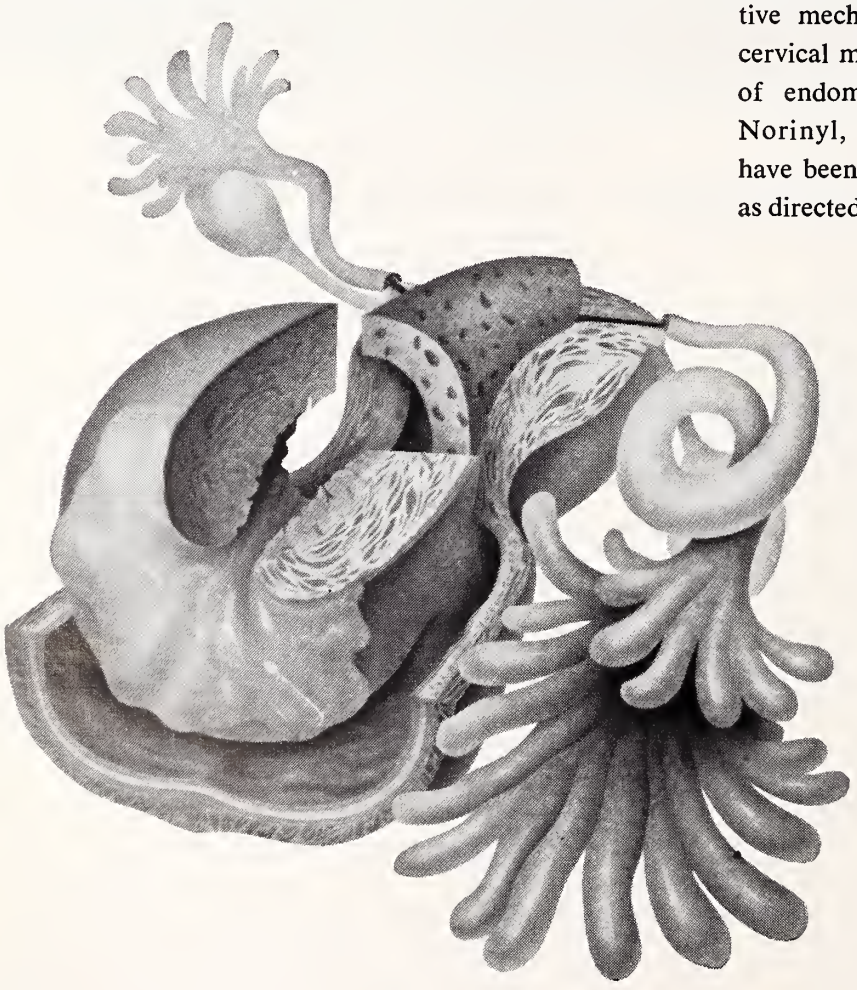
for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

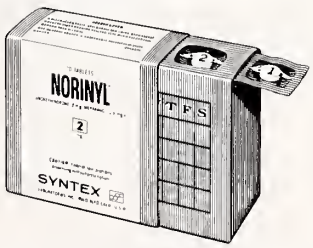
plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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chlorthalidone 50 mg. reserpine 0.25 mg.

1 tablet daily brings pressure down

Advantage: Both components of Regroton are long-acting.
Average dosage: One tablet daily with breakfast.
Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.
Warning: Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs. With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.
Side effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.
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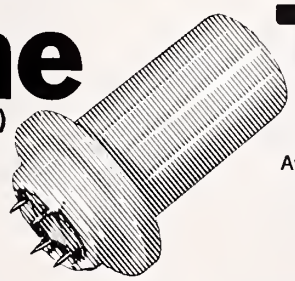

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Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

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Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

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Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

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SQUIBB NOTES ON THERAPY

Breast-feeding and the "modern mother"

Despite a mild resurgence of interest in the importance of breast-feeding a few years ago, many women today do not choose to nurse their young. This is for a variety of reasons—social, economic, cultural and sometimes medical. In such cases the physician's task is to find the most suitable means of preventing lactation and easing the pain of breast engorgement.

The means of therapy

The value of hormone therapy for this indication is of course well established. Both androgen and estrogen are known to inhibit the production and secretion of the lactogenic hormone by the anterior pituitary. As estrogen levels decline sharply at parturition, lactogenesis is established. When androgen and estrogen are administered to the patient before the release of the lactogenic hormone lactation and breast engorgement are usually prevented.

The time of therapy

The time of administration of this combined medication is crucial; it must be given early enough to suppress the pituitary prolactin and last long enough to permit physiologic readjustment during the puerperium. Excellent results are most often seen when therapy is administered before the onset of the second stage of labor.

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Providing single-dose therapy for the prevention of lactation and breast engorgement, Deladumone OB is a potent androgen-estrogen combination with a prolonged action. The optimal balance of androgenic and estrogenic hormones achieved in this preparation minimizes the disadvantages inherent in single hormone therapy, such as rebound breast engorgement. Involution of the uterus and resumption of menstrual cycles are not affected.

As reported in a recent published study (Roser, D. M.: Obstet. & Gynec. *27*:73, 1966), Deladumone OB provided good suppression of breast engorgement in 95.3% and suppression of lactation in 81.1% of 86 obstetrical patients. These results are in general agreement with those of many earlier investigations; in several studies this injectable androgen-estrogen combination proved to be superior to oral medication.

Dosage:

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Contraindications:

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Precautions and Side Effects:

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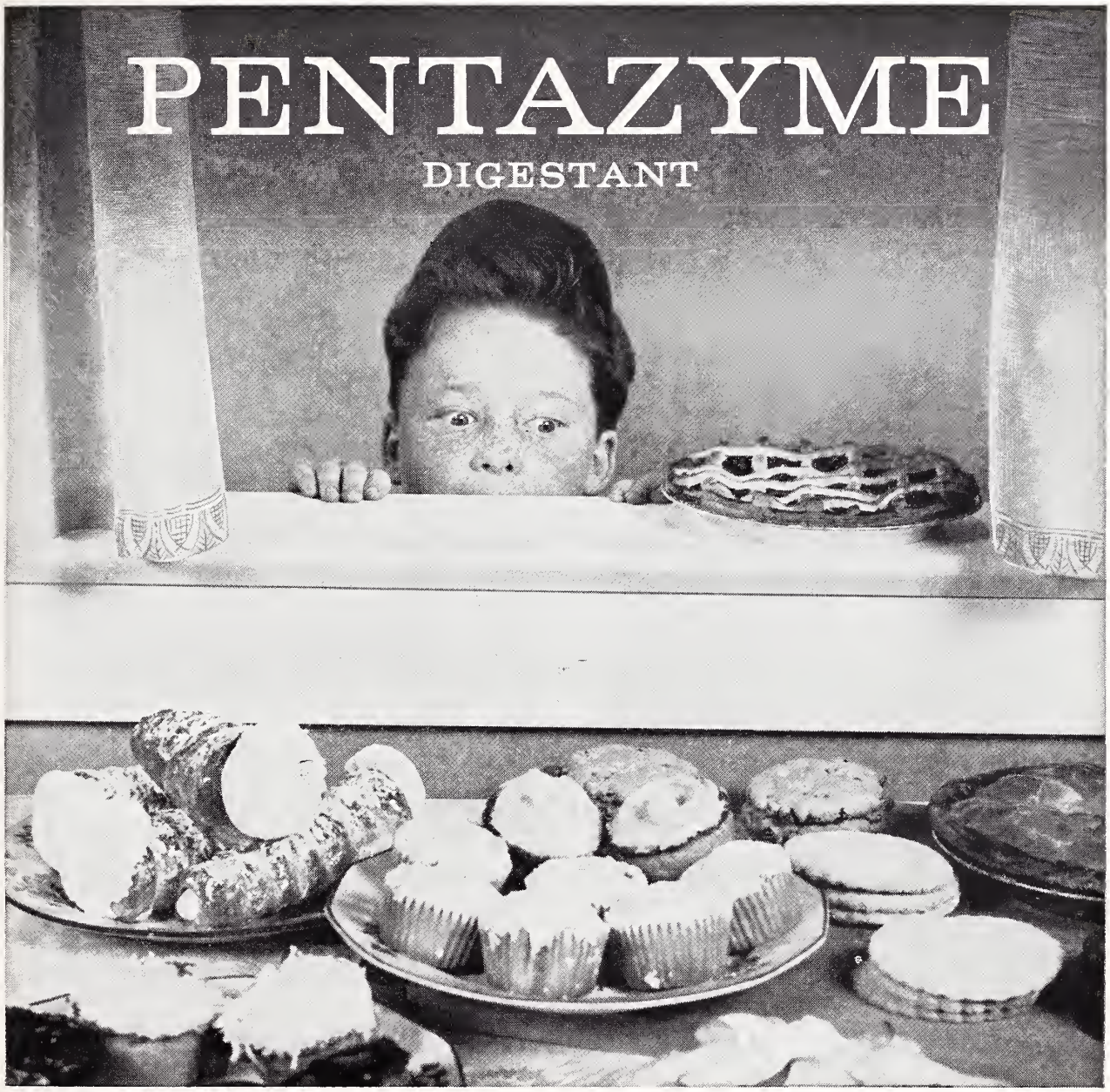

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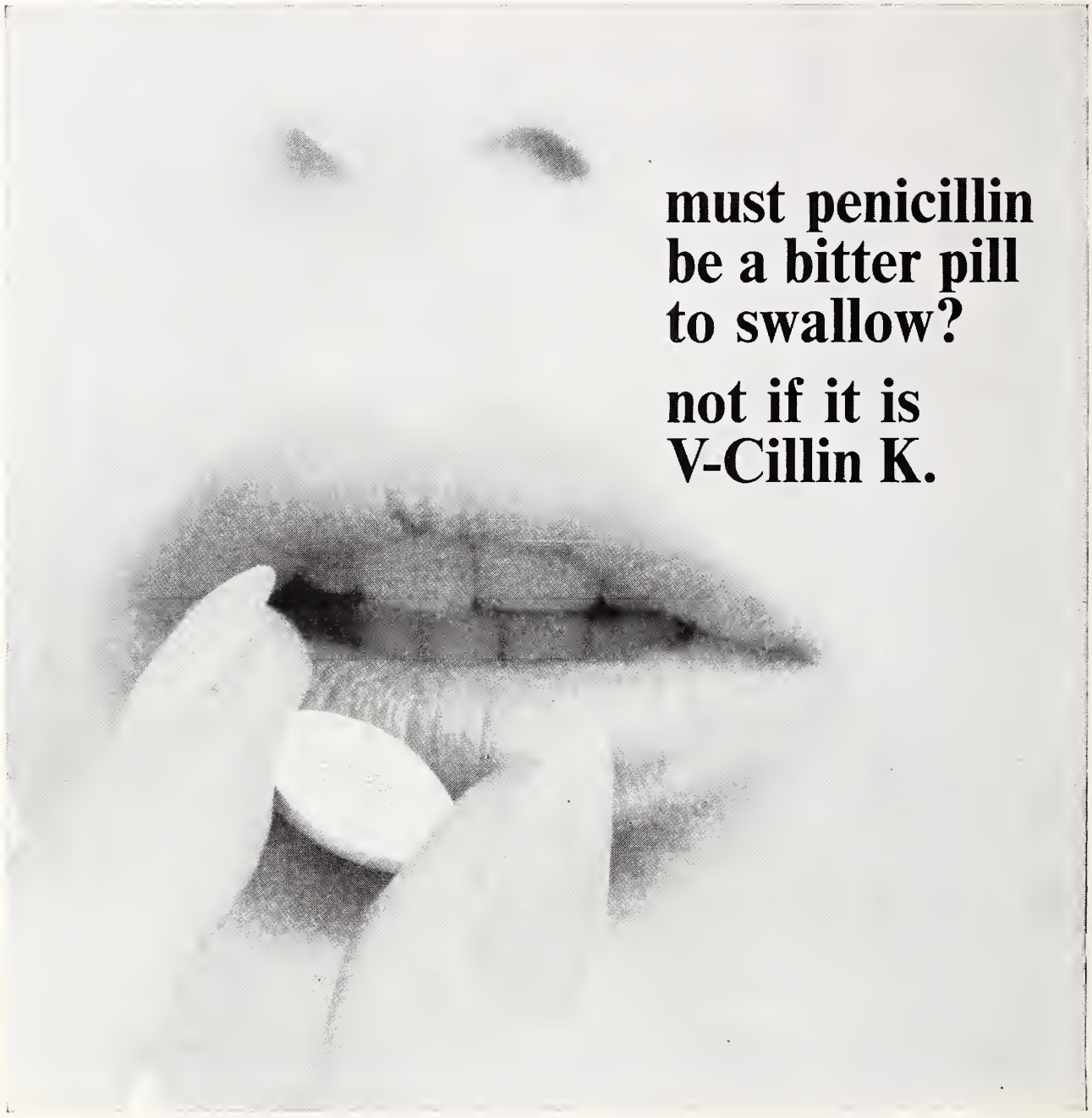

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Scientific Articles

Surgical Management of Biliary Tract Disease

FRANK GLENN, M.D.
New York

Progress in the recognition and management of biliary tract disease has been continuous since Bobbs'[2] initial operation of cholecystostomy in 1867. Surgical therapy has come to be the accepted method of treatment not only because it provides an effectual means of interrupting the disease but because the operative procedures are being accomplished with less and less risk and discomfort for the patient. Each decade sees the diagnosis more precisely established and treatment more readily embarked upon. The ultimate objective is to prevent the disease, but until that is attained corrective measures must be relied upon. In the meantime the magnitude of the surgical problems associated with it increases because a larger proportion of the population is living into an age range beyond 65 years, a time when complications and sequelae of this disease are more frequent. Also the actual proportion of operations upon the biliary tract done each year in relation to other operative procedures is increasing. Whether this represents a greater incidence of the disease or earlier acceptance of surgery is not evident.

Examples of items relative to the over-all problem of biliary tract disease are presented to emphasize recent advances and new difficulties. These include: (1) cholangiography, percutaneous and intravenous; (2) reduction of surgical morbidity of complications and mortality; (3) an increasing acceptance of surgical management of acute cholecystitis; (4) problems of biliary tract disease in the elderly, and (5) discussion of the incidence of the disease.

Percutaneous Transhepatic Cholangiography: One of the earliest attempts to visualize the intrahepatic biliary passages was performed by Burckhardt and Müller[3] using the percutaneous transhepatic route several years before the introduction of oral cholecystography by Graham and Cole.[7] Its usefulness is primarily in individuals who have jaundice—particularly obstructive jaundice. The procedure should be reserved for patients who are scheduled to be operated upon, or upon whom a differential diagnosis is mandatory. We shall emphasize a little later that it is not a diagnostic procedure to be done on an ambulatory basis under any circumstances. The patients in whom we employ this procedure are in the hospital and are being prepared for surgical operation. In the x-ray department and with the guidance of the fluoroscope equipped with an image intensifier, a long needle is introduced into the liver substance through the subcostal area in the anterior axillary line. In the obstructive-jaundiced patient 10, 15 or even 30 cc. of bile is permitted to drain off and an equal amount of 75 per cent Hypaque is introduced. Under fluoroscopy, the course of the dye is observed. Roentgenograms are taken in various planes, the objective being to fill the ductal system as thoroughly as possible in an effort to show any intrinsic lesion of this system. Its usefulness is greatest in those patients in whom the diagnosis of an obstructive jaundice[5] or hepato-cellular jaundice is in question. This will be demonstrated in a series of illustrations which emphasize the clarity with which this method of cholangiography depicts the ductal system and indicates the nature

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and extent of abnormalities when they are present.

1. *Hepato-cellular disease, when laboratory data and clinical observations are not sufficient to permit a definite diagnosis.* Here is outlined a normal biliary system without obstruction, conclusively demonstrating in view of the additional information obtained, that this patient has hepato-cellular disease.

2. *Obstruction of the common duct due to calculus.* The roentgenogram reveals a large stone in the distal common duct. The distention of the ductal system proximal to the large calculus is evident.

3. *Carcinoma of the pancreas.* An obstruction at the lower end of the common duct with marked dilatation of the ductal system proximally reveals a deformity. It is quite characteristic of extrinsic pressure of the intramural portion of the common duct. The patient was demonstrated at operation to have a carcinoma of the pancreas.

4. *Carcinoma of the ampulla of Vater.* This cholangiogram demonstrates the narrowing of the terminal portion of the common duct with an irregular pattern that is indicative of malignancy at the vicinity of the ampulla of Vater. This was confirmed at operation.

5. *Stricture of the common bile duct.* This illustrates a patient with obstructive jaundice who had previously sustained a common duct injury during cholecystectomy. The obstruction is readily demonstrated with the dilatation of the ductal system proximal to it.

These five examples demonstrate the usefulness of this procedure. It is not without hazards, namely, (1) the possibility of bile leakage into the peritoneal cavity and (2) hemorrhage. It is because of these dangers that we recommend it be done as a preoperative procedure. The information gained is of great value. In our experience it provides specific information not obtainable by other methods of investigation. The inability to visualize the ductal system by oral and intravenous cholangiography in patients with jaundice (serum bilirubin level of over 3 mg. per cent) has been well documented. Very often the cause of the jaundice is calculi—the demonstration of their number and location is of importance to the surgeon. It also affords an excellent method of differentiating between extrinsic pressure upon the common duct, such as carcinoma of the pancreas, and intrinsic neoplasia of the ductal system such as carcinoma of the ductal system or the ampulla of Vater. Intraluminal ductal abnormalities such as congenital anomalies, the exact location of strictures and fistulae are well demonstrated preoperatively by this method.

Intravenous Cholangiography: For almost 15 years we have been employing intravenous cholangiography on indication, and we have had an experience with over 4,000 intravenous cholangiographic examinations. We have experienced very few serious complications, and we believe it a reasonably safe procedure. Because it includes the intravenous administration of an iodine-containing preparation caution is required. Its usefulness is (1) in those patients for whom oral cholecystography is unsatisfactory and (2) among those individuals who are suspected of having common duct calculi but who do not have jaundice with an associated bilirubin level greater than 3 mg. per cent. It is also of value in differential diagnosis of biliary tract disease as a cause of an acute abdomen. Positive information gained by this method is about 90 per cent accurate. Recently the Mayo Clinic[1] has reported a larger experience that is in general agreement with our own.

Ceratinly the diagnosis of biliary tract disease rests on a thorough history and physical examination. Adjunctive laboratory tests provide total evaluation. We would list intravenous cholangiography as an adjunctive laboratory test; it is of considerable help in evaluating the biliary ductal system. We think it is of great value to those patients who have been subjected to cholecystectomy and have a persistence or recurrence of upper abdominal symptoms. The information provided may give justification for the conclusion that the biliary system is not the cause of the symptoms or it may, on the other hand, reveal something of importance such as calculi within the common bile duct, a long cystic duct remnant that contains stones, or obstruction at the lower end of the common duct associated with scarring and fibrosis.

Figure 1. Roentgenogram revealing a normal biliary system.

Reduction in Morbidity and Mortality Following Surgical Procedures Upon the Biliary Tract: The reports from representative clinics throughout the United States and in addition from several of the European countries, particularly the Scandinavian group, attest to a trend toward diminishing risk in surgery of the biliary tract. The morbidity from complications and the mortality rate have gradually been reduced since biliary tract surgery first began. For elective cholecystectomy, the mortality rate is well under 1 per cent.[4] When elective cholecystectomy is accompanied by exploration of the common duct for calculi, this is gradually increased about 1 per cent for each decade over 50. The mortality rate of elective cholecystectomy on a patient with unrelated but co-existing disease is probably around 1 per cent. When cholecystectomy is contemplated because of acute cholecystitis, with or without common duct exploration, the mortality rate is approximately 2.5 per cent. If, in addition, there has been added to the acute cholecystitis a complication such as stones within the common duct resulting in jaundice, or a localized abscess as a result of perforation of the gallbladder, the mortality rate is about 5 per cent. Because of the high incidence of acute cholecystitis with complications among the elderly (patients 65 years and older), we believe a separate category should be made for those in this group. For this group of patients who are often seriously ill because of the acute process, or chronically ill because of degenerative co-existing disease, the morbidity of complications and the mortality rate goes up markedly. We would estimate this to be between 5 and 10 per cent. More accurate information is perhaps obtained from the type of operation that is embarked upon. Where cholecystostomy is employed, and it usually is among patients who are very poor risks, accompanying complications render any operative procedure more hazardous. The mortality rate under these circumstances is around 10 per cent. Intermingled with these varied categories, of course, are those situations in which the acute cholecystitis is actually a complication of another disease, such as advanced generalized arteriosclerosis and arteritis. Carcinoma of the gallbladder, almost always occurring with cholelithiasis, may be the cause of an acute cholecystitis without prior symptoms referable to the biliary tract.

The decrease in morbidity of complications and the mortality rate in recent decades is not due to any specific or newly introduced technic but rather

Figure 2. Roentgenogram revealing large stone in distal common duct.

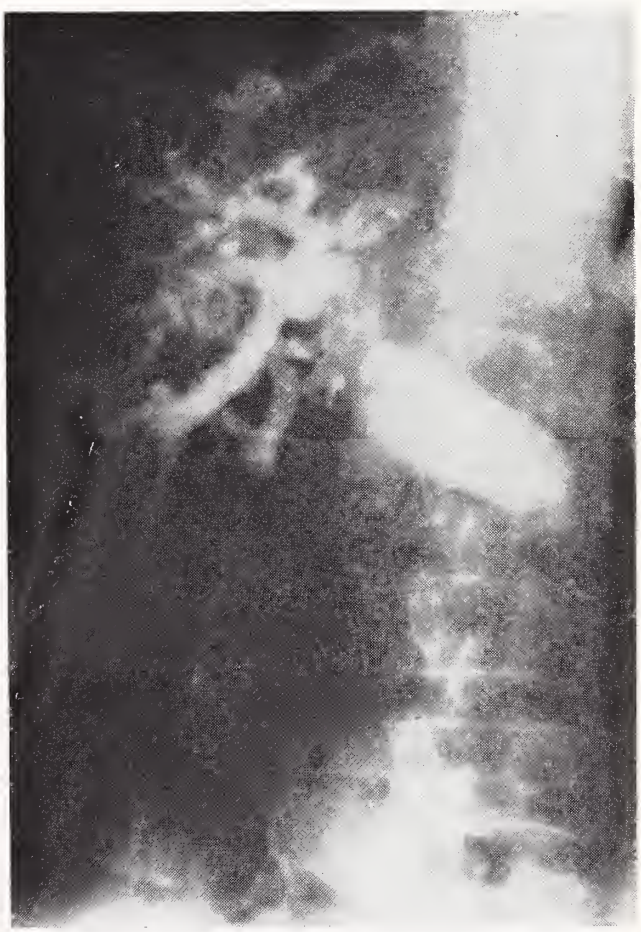

Figure 3. Roentgenogram of a patient with carcinoma of pancreas. Nipple-like projection is characteristic of this type lesion.

reflects a better understanding of the physiologic problems of patients with biliary tract disease, and consequently better preoperative preparation. Undoubtedly better trained surgeons working under more favorable circumstances than in the past account for not only more thorough preoperative and postoperative care but the more meticulous performance of the surgical procedure. That the role of the anesthesiologist has been an important one is evidenced by the tremendous reduction over the past 20 years in the incidence of postoperative pulmonary complications following operations in general, and this is most striking in those patients subjected to upper abdominal procedures.

Trend Towards Surgical Treatment of Acute Cholecystitis: The management of the patient with acute cholecystitis has long been a controversial matter in American surgery.[6, 8] There have been those[10] who felt that most patients with acute cholecystitis usually recover from the acute episode and are best managed medically during this interval to be subjected later to surgery on an elective basis. The other concept has been one that maintains the course of acute cholecystitis is unpredictable and subject to complications such as perforation which occur and account for an avoidable morbidity of complications and mortality. Non-surgical treatment encourages the patient to remain at home rather than enter the hospital where he can be closely observed. There is currently a general trend toward the surgical management of a patient with acute cholecystitis, and we therefore find that the patient with a diagnosis of acute cholecystitis is brought into the hospital more frequently than formerly. This results in a greater accuracy in diagnosis and provides the opportunity for an operation early in the phase of acute cholecystitis unless there is a contraindication. The urgency is not comparable to that of the patient with acute appendicitis, and emergency operations on patients with acute cholecystitis are not commonly done. The number of patients being operated upon early, i.e., within a matter of 24 hours after the onset of an attack of acute cholecystitis, is increasing. The mortality rate tends to parallel the over-all experience with biliary tract disease, namely, that in the young and robust, the mortality rate is very low—less than 0.5 per cent, whereas in the older age group the mortality rate goes up as high as from 5 to 10 per cent due to the fact that the process has advanced farther (often with minimal symptoms) and because of associated systemic conditions. The trend today is to perform a cholecystectomy when a patient is demonstrated to have gallstones. A patient who has gallstones and develops an acute attack is quite likely to follow the advice of a physician or surgeon and have surgery done as a result of that attack rather than because of the knowledge that he has gallstones. In the past there was a tendency for patients to tolerate symptoms arising from re-

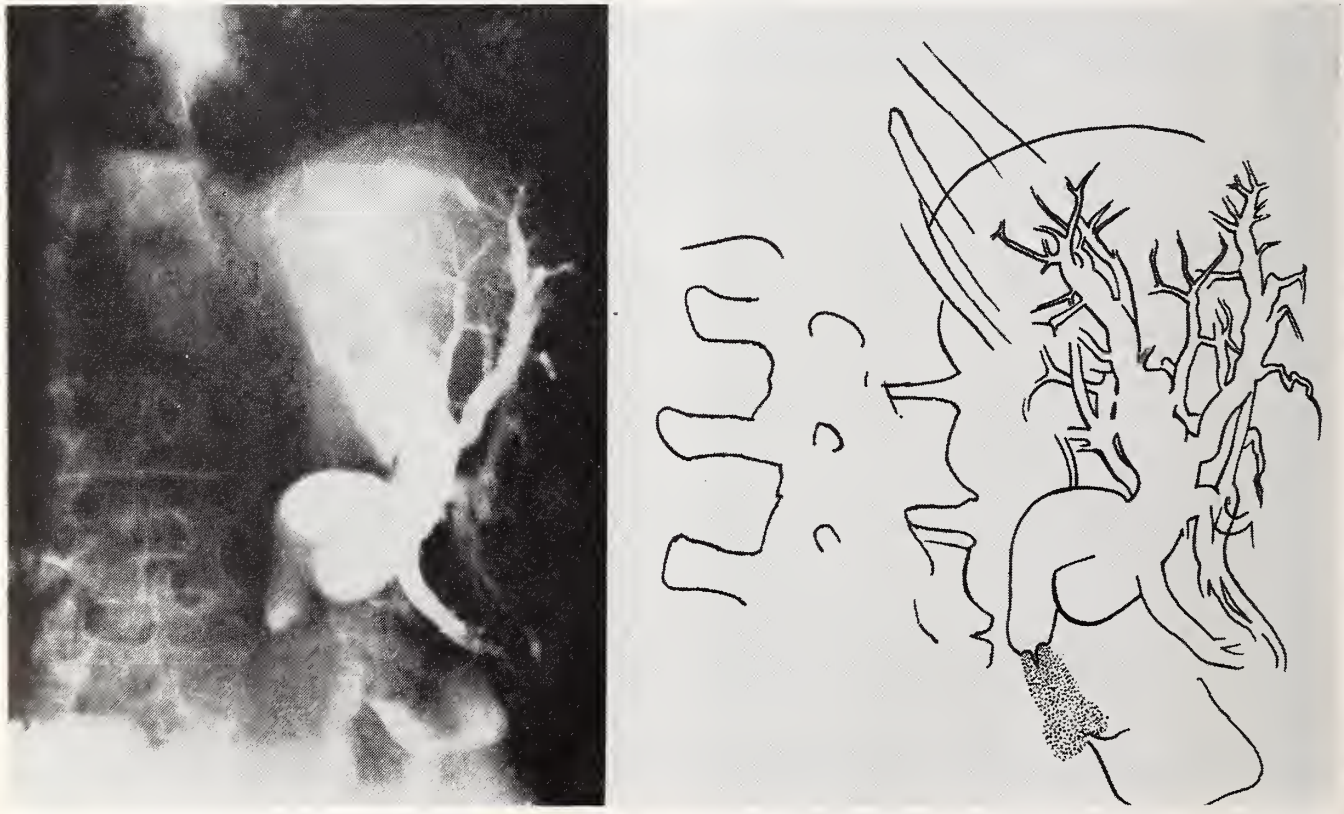

Figure 4. Roentgenogram and line drawing demonstrating narrowing of terminal portion of common duct with an irregular pattern. This is indicative of malignancy of ampulla of Vater.

peated attacks of cholecystitis, but today the trend is changing and operation is accepted in order to eliminate or interrupt the symptoms.

Biliary Tract Disease in the Elderly: With that portion of our population over 65 years of age increasing year by year (estimated at 17 and a half million in 1965) more attention is being focused upon this group as far as surgical problems are concerned. The most frequent cause of an acute abdomen in patients over 65 in our experience is biliary tract disease. This has been reported by others. Biliary tract disease in most instances presents as an acute obstructive cholecystitis, choledocholithiasis, obstructive jaundice, or a combination of these. Many of the elderly patients with acute conditions of the biliary tract do not give a history of previous difficulty indicative of biliary tract disease. Undoubtedly in many instances symptoms are forgotten and perhaps, in an appreciable number, the patients have accepted the symptoms of the disease as being their lot. Regardless of whether these patients give a history of symptoms or not, the disease is well advanced in the majority as far as local process when they are first seen by a physician. It is our impression that these patients either have a lower threshold to pain, are accustomed to anorexia, or the process has progressed without causing symptoms. This statement is applicable to the acute obstructive type of cholecystitis. The high incidence of common duct calculi in patients over 65 years with gallstones has long been recognized. Common duct calculi can be impacted in the common duct and produce either a complete or incomplete obstruction with marked jaundice and yet cause few symptoms and little pain until infection becomes overwhelming as in acute obstructive suppurative cholangitis. The role of unrelated degenerative processes, particularly those of the vascular system, contribute materially to the morbidity of complications and the mortality rate of the elderly. In addition, patients with urinary difficulties and those with uremia occasionally develop an acute cholecystitis as a complication. The relationship is not clear. Acute cholecystitis of the obstructive type is also seen in the elderly patient who is subjected to an operation on some other part of the body. It occurs following the resumption of oral food when preceded by fasting. Prophylactic measures should be directed at preventing the accumulation of large amounts of concentrated bile in the gallbladder followed by a sudden and vigorous attempt to empty itself. Prolonged periods of fasting

Figure 5. Roentenogram of patient with carcinoma of the common bile duct reveals irregular deformity and narrowing of distal segment with proximal dilatation.

Figure 6. Roentgenogram revealing an anomalous cystic duct medial and parallel to distal common duct.

should be avoided whenever possible. The elderly patient with acute cholecystitis or an obstructed common duct merits a procedure that will see him over the immediate period. Definitive surgery can well be postponed in this group of patients. Carcinoma of the biliary tract not infrequently presents as an acute cholecystitis or pericholecystic abscess. Almost 60 per cent of patients over age 65, who in our experience have been subjected to operations upon the biliary tract, have had evidence of a degenerative disease process. These degenerative processes in order of frequency are: hypertensive cardiovascular disease, arteriosclerotic disease, diabetes mellitus, chronic pulmonary disease, cirrhosis, chronic renal disease, diverticulosis and diverticulitis, and the crippling conditions of the musculo-skeletal system.

Gallstones More Prevalent in America: Are gallstones actually increasing in America or does it only seem so? In a comprehensive review by Newman and Northup[11] of the autopsy incidence of gallstones in countries representative of the world population, a wide range was observed. In Australia the reported incidence was 13.3 per cent, whereas in the West Indies the reported incidence was 0.1 per cent. The United States ranked third in this survey with an incidence of 10.8 per cent. Although an occasional autopsy of the new-born shows stones, this is most unusual, as are gallstones before the age of puberty. The majority of biliary tract calculi seen in children are the result of blood dyscrasias and metabolic disturbances. It is a common impression that the greatest increase in the incidence of biliary tract calculi is seen in women following their first or second pregnancy. At The New York Hospital-Cornell Medical Center among over 6,000 patients treated surgically for gallstones, approximately 4,200 were women. Our records indicate that three out of four of these women had been pregnant one or more times.

The only valid basis for determining the actual incidence of gallstones involves combining a medical history and an autopsy. So far as the entire population is concerned relatively few postmortems are done, and seldom are these correlated with the medical history to determine whether gallstones had been surgically removed. Currently we are limited in our studies to the statistics from the public health service and reports from institutions in which there is a special interest in the incidence of biliary tract disease. A representative study and one which we believed to be excellent is that reported by Lieber[9] in 1952 in which he reviewed almost 27,000 consecutive autopsies at Philadelphia General Hospital occurring between 1920 and 1939 and almost 8,000 consecutive autopsies performed at Jefferson Medical College Hospital from 1920 to 1949. In females the total experience indicated an incidence of 16.8 per cent whereas for the males it was 7.3 per cent. Death rates per hundred thousand population in the United States have varied from 2 to 2.5 over the past decade. Unfortunately, the crude death rates ascribed to biliary tract disease are probably greatly underestimated as the immediate cause of death may be the result of liver damage or even peritonitis.

Definite indeed is the increase in the proportionate number of biliary tract operations in general hospitals in relation to other conditions for which surgery is widely employed. Hernia, for instance, remains the most frequent operation done in a group of general hospitals and medical center hospitals representative of the country at large. However, if the hernias are broken down into groups that may be considered primary, those that are congenital in origin, those that are secondary to other operations, and recurrent hernias, then operations upon the biliary tract frequently assume first place. In this regard, during the past 20 years since the introduction of antibiotics there has been a decrease in the number of operations for acute appendicitis in many institutions.

It is our impression that the incidence of gallstones in the adult population ranges between 15 and 20 per cent. Whether or not the increase in the performance of the surgical procedure is the result of medical facilities being more available, including the use of diagnostic measures that bring gallstones to light, or whether there has been a change in the actual incidence of gallstone formation as a result of a change in our diet or habits remains to be determined. Earlier operations with relief of symptoms and presumably interruption of the disease in 85 to 90 per cent of individuals is unquestionably highly desirable in preventing the sequelae and complications of gallstones. The recognition of when in the decades of life, such as the child-bearing age in women, the greatest increase takes place serves a very useful purpose. The general practitioner should be ever mindful of the probable incidence among young and robust women in the child-bearing period. Having recognized their presence, and bearing in mind that the risk of operation is probably less than the likelihood of complications or sequelae, early surgery will logically be recommended.

CONCLUSION

The surgical treatment of biliary tract disease is constantly being rendered more effectual as the result of earlier and more precise diagnosis, early operations, and refinements in pre- and postoperative care. These developments and trends should in part solve the problems resulting from the incidence of this disease in the elderly segment of the population. The ultimate objective is the elimination of biliary tract disease. The accumulation of knowledge about it—be it relative to its incidence, its common course, or its rare complications—is essential if it is to be understood and prevented.

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Spontaneous Rupture of the Esophagus

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Decorah

SPONTANEOUS RUPTURE of the normal esophagus is a rare disease but one which is almost invariably fatal unless promptly recognized and adequately treated. It is felt, therefore, that the following case report and review of the subject may be of interest.

H.B., a 60 year old white male was admitted to Smith Memorial Hospital, Decorah, Iowa, on January 31, 1966, with severe epigastric and low anterior chest pain. Six hours earlier he developed a headache for which he took two Anacin tablets. He became nauseated, retched violently and vomited about 100 cc. of gastric contents. He immediately experienced severe lower chest and high epigastric pain. This pain radiated into his left supra-clavicular region and was aggravated by breathing, coughing and swallowing.

Examination shortly after admission to the hospital and six hours subsequent to the onset of this illness revealed a very ill man, propped up in bed with shallow rapid respirations and peripheral cyanosis. Blood pressure was 126/80, pulse 100 per minute. Clinical examination of the heart and lungs was unrevealing. Abdominal examination showed marked generalized board-like rigidity and hypoactive bowel sounds. Abdominal tenderness was conspicuous by its absence—only minimal inconstant tenderness being present high in the epigastrium. The remainder of the physical examination was essentially negative.

The history was strongly suggestive of a spontaneous rupture of the esophagus but myocardial infarction and perforated peptic ulcer had to be eliminated if possible. An E.K.G. was interpreted as normal. An upright chest x-ray as well as flat and decubiti x-rays of the abdomen failed to reveal any evidence of free air. Closer scrutiny of the lateral decubitus film raised the question of a possible, small, 1 cm. x 2 cm. collection of air in the region of the esophago-gastric junction. A lipoidal esophagram was done in the prone and left lateral position, but this failed to reveal any evidence of leakage from the esophagus. In spite of this a diagnosis of probable spontaneous rupture of the esophagus was made, chiefly on the basis of the classical clinical history and the progressive deterioration of the patient's general condition. The patient was taken to the operating room two hours after admission and eight hours from the onset of his illness.

The mediastinal esophagus was approached through a left postero-lateral thoracotomy incision between the seventh and eighth ribs. There was no free fluid in the pleural cavity but upon opening the distal mediastinal pleura, a foul odor was noted and the periesophageal tissues were edematous and inflamed. A 2 cm. longitudinal, full thickness tear was located on the left postero-lateral aspect of the esophagus, approximately 5 cm. above the diaphragm. A nasogastric tube was passed into the stomach under direct vision and the tear closed in layers with 000 chromic catgut to approximate the mucosal and muscular layers. The posterior leaf of the mediastinal pleura was tacked over the repair and the rest of the inferior mediastinum was left open for drainage purposes. The chest was closed leaving a large chest tube which was connected to an underwater seal.

Postoperatively the patient was quite ill for several days with recurrent fever spikes to 104°F

and a marked toxic psychosis. Heavy doses of penicillin and streptomycin were administered. The nasogastric tube was removed on the fourth postoperative day and oral feedings started. The chest tube drained significant amounts of purulent fluid until the tenth day when the drainage ceased and the tube was removed. The patient's hospital stay was prolonged by two loculated empyematous pockets which responded to repeated thoracenteses. The patient was discharged five weeks postoperatively having lost 30 pounds in weight.

Three months after discharge he had returned to full employment with a normal chest x-ray except for minimal pleural thickening. He has since regained most of his lost weight.

DISCUSSION

The first case of spontaneous rupture of the esophagus was recorded in 1724 by Boerhaave,[1] a Dutch surgeon whose illustrious, though unfortunate, patient was Baron Von Wassenaer, grand admiral of the Dutch fleet. This gentleman had overindulged at the dinner table and had taken some olive oil as an emetic. During the subsequent retching and vomiting, he experienced a sudden severe pain in his chest and declared that he would die immediately. At autopsy Boerhaave discovered the olive oil with a generous portion of roast duck in the admiral's pleural cavity.

The subject was comprehensively reviewed in 1956 by Derbes and Mitchell[2] who collected 157 cases from the world literature. In 1959 Dorsey[3] reported the first spontaneous rupture of the esophagus in a neonate. Since then three further cases of spontaneous neonatal rupture have been reported by Wiseman,[4] Hochberg[5] and LeBrigand.[6] Mahon in 1960 and Graham Ross in 1961 each reported single cases, the preoperative diagnosis was perforated peptic ulcer in each instance. The case reported by Ross was found to have a rupture of the middle third of the esophagus at autopsy. There have been only three other reported cases of spontaneous middle third perforation and a solitary case of cervical rupture.[9]

Briggs[10] reported eight cases in 1961, one of which was diagnosed correctly upon admission. Three cases with three deaths were reported by Bruno[11] in 1963. In reviewing all their cases of perforation of the esophagus from all causes (instrumental, anastomotic leak, etc.) Foster[12] from Vanderbilt University in 1965 found five cases of spontaneous rupture. An excellent collective review on the subject was published by Tesler and Eisenberg in 1965. The most recent publication on the subject was that of Bowers and Ferguson[13] who reported three additional cases in 1966. One may assume that there have been at least 200 recorded cases of this disease.

ETIOLOGY

The common physiological denominator in nearly all cases is an explosive act of vomiting or violent retching, often occurring after a large meal. A few cases have been reported where vomiting did not occur but these cases were associated with acts which increased intra-abdominal pressure—Childbirth,[15] straining at stool,[16] and a convulsive seizure.[17] Two cases[18] have been reported which followed forceful swallowing. Mackler,[19] on the basis of extensive experimental work on fresh cadaveric esophagi, believes that rupture is due to a sudden, violent increase in intra-abdominal pressure with explosive expulsion of a large amount of gastric content into the fully relaxed esophagus with the tear occurring where this massive distension is initially sustained—the distal esophagus. It may also be significant that the distal esophagus lacks the buttressing quality afforded the proximal and mid-esophagus by such comparatively unyielding structures as the trachea, aortic arch, descending aorta, left bronchus, pericardium and various anatomic nerve plexuses. However, in 95 per cent of cases the tear characteristically occurs in the LEFT POSTEROLATERAL aspect of the distal esophagus. There is no suitable explanation for this particular site of predilection. The tear is nearly always longitudinal in character, measuring 2-4 cm. and located 3-6 cm. above the diaphragm. The longitudinal nature of the tear is explained by Derbes and Mitchell by mathematical analysis, using the principle of free body diagrams which show that hydrodynamic factors incident to increased internal pressure compel the esophagus to tear in a vertical plane.

SIGNS AND SYMPTOMS

The classical symptomatology consists of sudden, severe, low anterior chest or epigastric pain, precipitated by violent act of vomiting or retching. The pain is unremittingly excruciating and may radiate into the neck, arms or back. Dyspnoea, cyanosis and orthopnea develop rapidly and peripheral vascular collapse may soon appear. Swallowing often aggravates the pain and if the swallowing is followed shortly thereafter by a bout of coughing, one may safely assume that the mediastinal pleura has ruptured and that the esophageal tear communicates with the free pleural cavity. It should be remembered that any act which increases intra-abdominal pressure, even forceful swallowing, may be the precipitating factor.

Physical examination usually reveals a critically ill patient, most often a male. Males out number females 5 to 1. The patient is usually sitting up in bed in a crouched forward position. Varying degrees of dyspnoea and cyanosis are often present. Subcutaneous emphysema is frequently present over the chest wall and classically in the supra-

sternal notch. Evidence of hydro or pneumothorax may be present on clinical examination. The abdomen is often rigid with varying degrees of epigastric tenderness. X-ray examination of the chest is helpful if it shows free mediastinal air, hydro or penumothorax. Lipoidal or gastrograffin swallow is diagnostic if the contrast material is shown to leak into the mediastinum or pleural cavity. Esophagoscopy has been used successfully on several occasions.[20]

DIFFERENTIAL DIAGNOSIS

Many acute surgical and medical catastrophies may partly mimic and be mistaken for spontaneous rupture of the esophagus. The most common misdiagnosis is a perforated ulcer. This is followed by myocardial infarction, dissecting aneurysm of the aorta, spontaneous pneumothorax, acute cholecystitis or pancreatitis, pulmonary embolism, incarcerated or strangulated diaphragmatic hernia, etc. Some of the diagnostic aids already alluded to may be of great value, but a suspicious awareness of the condition may be of equal or greater importance in reaching the correct diagnosis.

TREATMENT

There is universal agreement among writers on the subject that the treatment consists of surgical repair, performed as soon as possible. The first successful surgical repair was perfomed by Barrett[21] in 1947.

A few isolated cases of recovery have been reported following closed chest drainage. Derbes and Mitchell in their review of 157 cases collected from the world literature found that 55 of these cases had been treated surgically with a mortality rate of 36 per cent. They were also able to document the fate of 71 cases of the remainder; these were treated by non-surgical methods. Of these 71 medically treated cases, 25 per cent died within 12 hours, 75 per cent were dead in 36 hours while the remainder were all dead within seven days.

Sanderson[22] in 1965 reported an interesting case who recovered from an obscure, almost fatal illness, precipitated by nausea and vomiting. Three months later she underwent a thoracotomy for decortication of visceral and parietal pleura because of marked pleural thickening. Pathologic examination of the submitted specimen showed vegetable fibers within multiple granulomas. In retrospect this is probably the only patient who recovered from a spontaneous rupture of the esophagus without surgical aid.

In recent years there have been very encouraging results obtained by the conservative management of esophageal perforation caused by endoscopy. Mengoli[23] in 1965 reported 18 such cases treated conservatively with only one death. Shapiro[24] has accumulated a series of 24 cases, treated conservatively without a single fatality. However, these perforations occur during the course of endoscopic examinations on an empty stomach and are often suspected or recognized at the time they occur and therapy started immediately. On the other hand, spontaneous rupture of the esophagus occurs explosively on a full stomach with consequently greater spillage and contamination of the mediastinum; moreover, the diagnosis and treatment of spontaneous rupture is often delayed for many hours. It is very unlikely that the results from non-operative treatment, even with the help of modern therapy, would match those obtained by surgical closure of the perforation.

SUMMARY

A case of spontaneous rupture of the esophagus is presented. Thoracotomy and surgical closure of the perforation resulted in a satisfactory outcome. The literature, etiology and treatment is discussed.

I wish to thank John Goggin, M.D., of Ossian, for referring this case and T. F. Dynes, M.D., of Decorah, for his helpful medical consultation.

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Perforating Eye Injuries in Iowa

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THE PATIENT with a perforating eye injury, with or without intraocular foreign body, presents a major problem in the practice of ophthalmology. The initial management is fraught with many technical problems. Subsequent complications such as corneal scarring, cataract, retinal detachment and atrophy of the globe add to the initial problems, making their treatment frequently impossible.

Prevention of injury would certainly be the ideal solution. However, short of this, acquisition of more information about the background factors of ocular injury should be of substantial benefit in assessing and solving any problem. An attempt has, therefore, been made to review a series of ocular injuries with regard to the patient's sex, age, eye involved, seasonal incidence, causes of injury, occupation of adult males and, to emphasize the gravity of the problem, the visual outcome of the injured eye.

PROCEDURE

Hospital records of 270 consecutive cases of penetrating ocular injury involving 269 patients were reviewed. All injuries occurred between July 1, 1955, and July 1, 1965, and were subsequently treated at the University Hospitals. A number of cases had received preliminary treatment elsewhere. All cases involved an open wound of the globe, either a rupture or a perforation. Of the 270 cases, 105 or 39 per cent harbored an intraocular foreign body or an intra-orbital foreign body (through and through perforation).

From the Department of Ophthalmology, The University of Iowa College of Medicine. Supported by a Training Grant, NB5080, from the National Institute of Neurological Diseases and Blindness.

RESULTS

I. Sex

In our series we had 232 males and 37 females. This gives an 8:1 ratio of males to females or 86.3 per cent of the injuries occurring in males and 13.7 per cent in females. Under the age of 10 years this ratio fell to 4.2:1. This was due to the fact that approximately 50 per cent of the injuries involving females occurred in girls under the age of 10.

II. Age (Figures 1 and 2)

Seventy-six injuries or 28.3 per cent occurred in children under the age of 10, while 62 cases or 23 per cent of the total occurred between the age of 11 and 20. Thus 51.3 per cent of the injuries occurred in persons 20 years of age and under. Further analysis reveals that 41 per cent of the total injuries occurred in patients under 15 years of age.

III. Eye Involved

Of 270 injuries in this series 135 involved the right and 135 the left eye. One patient lost both

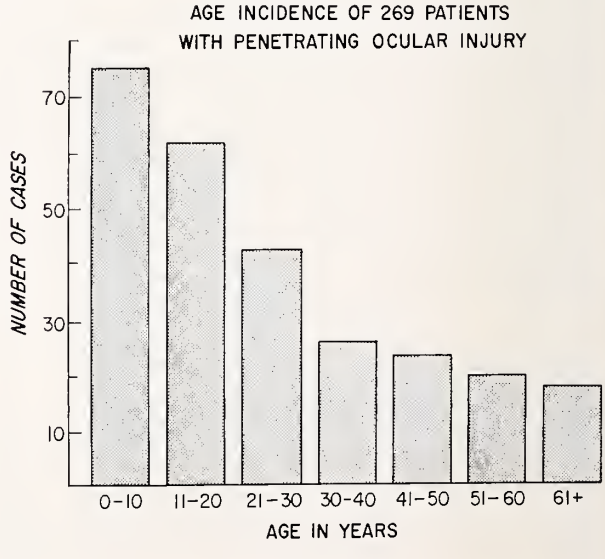

Figure 1

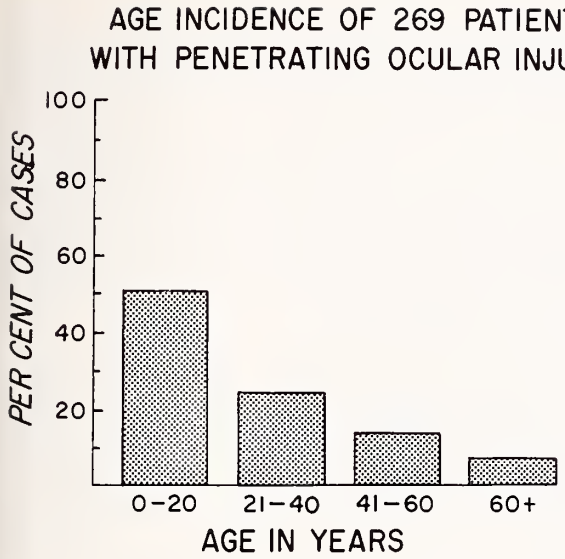

Figure 2

eyes due to injuries occurring three months apart. Another patient in the series lost his only remaining eye, the other eye having been removed after an injury before the review period of our study.

IV. Seasonal Incidence (Figure 3)

It was anticipated that a seasonal difference would occur in our study due to the temperate midwestern climate. This was not the case. Neither could a significant difference be found when the seasonal incidence was analyzed for those over and those under 16 years of age. The graph illustrates the incidence for the total group on a monthly basis.

V. Causes of Injury

It became apparent when reviewing the data that there was a marked difference between children and adults as to primary causes of injury. The age of 16 years was arbitrarily chosen as the dividing line between the two groups because it appeared to illustrate this difference best.

a. Children Under the Age of 16 (Figure 4)

The entire list of causes is included for the sake of interest. Forty-one per cent of the penetrating injuries in our study occurred in patients under the age of 16. Seven causes accounted for 57 of the 111 injuries or 51 per cent of the injured in this age group.

Firearms and shells occupied a regrettable first place, broken glass was second, and thorns, sticks and slivers were in third place. Knives, BB's or pellets, darts and arrows and pounding on rock followed in that order to supply the top seven causes. Of interest is the fact that firecrackers, broken lenses and toys were well down the list. Use of firecrackers is restricted by Iowa law.

Four causes, for which a prevention could certainly be exercised, account for 22 per cent of the injuries. These four are firearms and shells, BB and pellet guns, firecrackers and dynamite caps.

b. Adults Over the Age of 16 (Figure 5)

In general, adult injuries were quite different in their etiology from the under 16 age group. The exceptions are firearms and shells and thorns, sticks and slivers, causes which ranked high in both age groups.

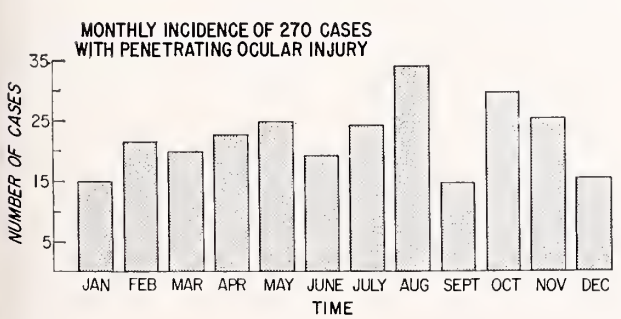

Figure 3

111 PENETRATING INJURIES OF 110 CHILDREN
(Age 15 or Under)

Cause	No. Cases
Firearms or Shells	11
Broken Glass	10
Thorns, Sticks or Slivers	9
Knives	8
BB and Pellet Guns	7
Pounding on Rock	6
Darts and Arrows	6
Firecrackers	3
Auto Accidents	3
Broken Lenses	3
Nails (Flying)	3
Pencils	3
Springs	3
Dynamite Caps	3
Pitchfork	3
Scissors	2
Metal Rod	2
Steel Striking Steel	2
Ball with Nail	1
Ice Pick	1
Extension Cord	1
Wire	1
Hayhook	1
Spoon	1
Toy	1
Furniture	1
Needle	1
Stick with Nail	1
Weed Cutter	1
Fork	1
Musical Record	1
Haircurler (Brush Type)	1
Rotary Mower	1
Finger	1
Fishhook	1
Paper Clip	1
Uncertain Striking Objects	6
Total	111

Figure 4

If one combines hammering on metal and hammering on a chisel, wedge or punch, both of which involve metal striking metal, we get an amazing 35.2 per cent of penetrating injuries in patients over the age of 16. Even more striking is the fact that five causes accounted for approximately 60 per cent of the adult injuries when auto accidents, firearms and shells, and thorns, sticks and slivers are added to the above mentioned two causes.

c. *All Ages*

When both age groups are combined the five primary causes are in order of frequency: (1) Hammering on metal, (2) firearms and shells, (3) hammering on chisel, wedge or punch, (4) auto accidents, and (5) thorns, sticks and slivers. These five causes account for 43.7 per cent of the 270 injuries in this series.

Of interest is the finding that rotary lawn mowers account for four cases of penetrating injury in the series, and that there was an equal number of firecracker injuries in each age group.

PENETRATING INJURIES OF 159 ADULTS
(Age 16 or Over)

Cause	No. Cases
Hammering on Metal	33
Hammering on Chisel, Wedge or Punch	23
Auto Accidents	16
Firearms and Shells	15
Thorns, Sticks and Slivers	8
Springs	5
Broken Lenses	3
Broken Glass	3
Firecrackers	3
Rotary Mowers	3
Adjusting Tires	3
Wire	3
Nails	3
BB and Pellet Guns	2
Broken Augers or Bits	2
Wrench	2
Fists	2
Cutting Metal	2
Tire Blowouts	2
Exploding Auto Engine or Fan	2
Scissors	1
Emery Wheel	1
Knives	1
Dynamite	1
Darts	1
Pitchfork	1
Pounding Rock	1
Crank	1
Screwdriver	1
Hayhook	1
Pencil	1
Horse Kick	1
Dog Bite	1
Cable	1
Miscellaneous Striking Object (Uncertain Cause)	10
Total	159

Figure 5

VI. Occupational Incidence

The occupation was noted in 81 adult males whose injury occurred on the job. Farmers, as might be expected, led the list with 30 cases. Mechanics were second with 18 and laborers, machinists and truckers followed in that order. Metal striking metal was by far the most common cause of injury in this group.

VII. Visual Results (Figure 6)

This was the most difficult area to evaluate in this series, because the follow-up varied from a few days to almost 10 years. Fourteen of the patients were either too young to evaluate their visual acuity or the post-treatment visual acuity was not available. This group is shown at one end of the graph.

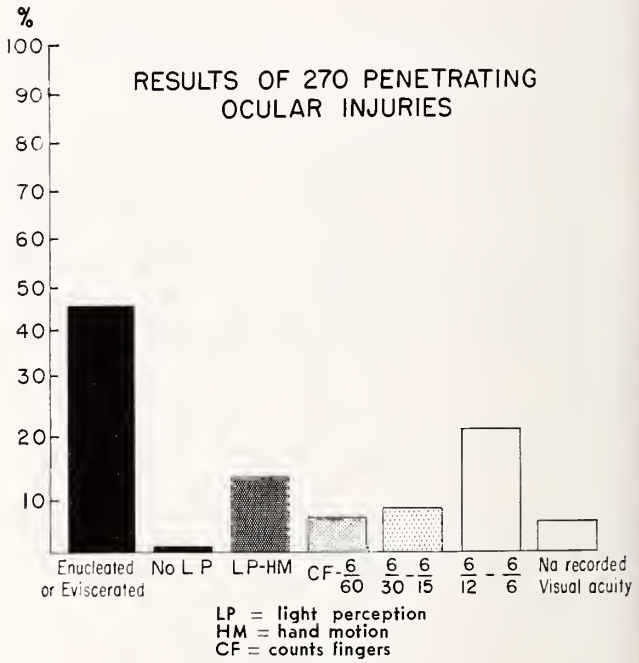

Figure 6

Of the 270 cases of perforating or rupturing injuries in this series, 46.7 per cent required enucleation or evisceration after the injury or during the post-traumatic period while 22.2 per cent regained a visual acuity of 6/12 or better.

Considering the 129 patients who retained their eyes and on whom a post-operative visual acuity was recorded, 46.5 per cent regained a vision of 6/12 or better while 29.5 per cent had visual acuity of hand motion or less, including three cases with no light perception.

Considering all cases in this series, a person sustaining an open wound of the eye has approximately a 65 per cent chance of becoming legally blind in that eye (vision of 6/60 or less) or having the eye removed.

The high percentage of enucleations and eviscerations in this series is probably due to the inclusion of severe types of injuries and to the many serious cases referred to us after preliminary treatment elsewhere.

SUMMARY

A review of 270 perforating or rupturing ocular injuries occurring in 269 patients is presented. Injuries are far more common in males than in females and over 50 per cent of the injuries occurred in patients under the age of 20. No marked seasonal differences were noted. Metal striking metal was the most frequent cause of the injury in the 16 and over age group, while firearms and shells was a regrettable leading cause in the under age 16 group. Over 65 per cent of the injuries resulted in legal blindness or in the removal of the involved eye.

A Comparison of Seasonal and Geographic Distribution of Western Encephalitis in Man and Horses in Iowa 1960-1963*

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DURING A FOUR-YEAR PERIOD, 1960-1963, 52 human cases of encephalitis of viral or unspecified etiology were reported to the Iowa State Department of Health. During the same four-year period, 1,221 cases of encephalitis in horses were reported by veterinarians throughout the state. Reports indicate cases in horses and cases in man occurred most frequently in the western areas of the state. Similarities in geographic and temporal distribution of cases in man and horses, the diagnosis of a case of WE in man, and the presence of WE antibodies in sera from horses indicate that some of the human cases of viral encephalitis or encephalitis of unspecified etiology reported during the 1960-1963 period may have been due to WE virus.

INTRODUCTION

Arboviruses are defined as viruses which in nature multiply in the body of arthropods, such as mosquitoes, without exerting detectable damage to their tissues or causing other ill effects. The arthropods then transmit the viruses to man and/or other vertebrates.

In the United States three arboviruses—eastern encephalitis (EE) virus, western encephalitis (WE) virus, and St. Louis encephalitis (SLE) virus—are significant causes of encephalitis in man.[3] While SLE seldom manifests itself clinically in horses, WE or EE can cause both clinical and subclinical infection in this species.

Geographically, WE usually occurs west of the Mississippi River but has been recorded in horses in all states of the United States west of the Appalachian Mountains and was reported in Florida during 1964.[20] EE occurs primarily in the Atlantic and Gulf Coast states.[15] SLE occurs sporadically in the central and western parts of the United States primarily; however, in recent years, it has been the cause of epidemics in some eastern and southeastern states. It was first identified as the cause of a human outbreak in and around St. Louis, Missouri, in the summer of 1933, hence its name.[1] The geographic distribution of these three arthropod-borne viral diseases varies from year to year, and one or all of the viruses may be active in the same area.[7]

WE occurs in horses and man most commonly during the late summer and early fall of the year, generally waning with the coming of cold weather and the subsequent decrease of mosquito activity.[15] In Iowa, mosquito activity usually occurs from May through October. During June the mosquito population is usually large and active enough to be compatible with significant arbovirus transmission. The number of mosquitoes begins to diminish during October. Few, if any, mosquitoes are present in November.[13] It is, however, still possible for human cases of WE to appear in November in Iowa

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because of the incubation period, which can be as long as three weeks. Hence, for this study, a survey period from June through November was selected in order to include all those cases of encephalitis of unspecified etiology which may have been due to an arbovirus.

The primary hosts for these arboviruses are several species of wild and domestic fowl.[4] The arthropod vector becomes infected by ingestion of blood from a primary host during the viremic phase of the disease and in turn transmits the virus to other fowl, to horses, or to man.[3] The horse and man are accidental hosts for the virus. During viremia, the virus in the horse is usually present in a concentration too low to infect arthropod vectors. Thus, the horse is a dead-end host and rarely, if ever, contributes to the cycle of infection. Nevertheless, the horse population, when adequately surveyed for arbovirus antibodies, may act as an indicator of the presence of WE in an area.[5, 7, 11, 12, 15, 17] Disease caused by WE in horses, mules and man is characterized by central nervous system disturbances and a low mortality.[5, 11, 17]

This paper compares the seasonal and geographic distribution of recorded cases of WE among horses with reported cases of encephalitis of viral or unspecified etiology in man during the four-year period, 1960-1963, in Iowa.

METHODS

Data for comparative analysis was obtained in three ways.

1. The morbidity reports of the Iowa State Department of Health were reviewed with special reference to human cases of viral encephalitis.*[8, 9]

2. A survey was conducted in December 1963 to ascertain the incidence of encephalitis in horses in Iowa in 1962 and 1963. A questionnaire was sent to all general or large animal veterinary practitioners in Iowa asking for the number of equine cases of viral encephalitis seen in 1962 and 1963. The cases reported for the most part are based on clinical diagnosis.

3. The data pertaining to horses for the years 1960 and 1961 were received from the USDA, Animal Disease Eradication Division, Des Moines, Iowa.[19]

RESULTS

During the years 1960 through 1963, 52 human cases were reported as viral encephalitis. The records revealed no identification of the causative agent for these cases. Of the 52 cases, 40 (77 per cent) were reported during the months of June through November (see Table 1).

Of the 40 cases in man reported during the months of June through November 1960-1963, 31 (78 per cent) patients resided in the western areas of Iowa. Of these 31 cases, 26 (84 per cent) were in residents of the west central area of the state (see Figure 1).

While the etiologic agents responsible for the 52 encephalitis cases in man are unknown, one human case of WE was reported in 1963. The attending physician reported the clinical manifestations of the disease were compatible with WE infection and the complement fixing (CF) antibody titers were 1:4 and 1:32 in the acute and convalescent serum specimens, respectively.

TABLE 1

REPORTED CASES OF HUMAN ENCEPHALITIS (VIRAL AND TYPE UNSPECIFIED) IN IOWA, 1960-1963

Month	1960	1961	1962	1963	Total
January	1	—	—	2	3
February	2	—	—	—	2
March	—	—	—	1	1
April	—	—	1	—	1
May	—	—	1	—	1
June	2	—	1	3	6
July	1	1	15	—	17
August	1	—	—	—	1
September	3	1	—	2	6
October	3	—	3	2	8
November	—	—	—	2	2
December	1	2	1	—	4
	—	—	—	—	—
Total	14	4	22	12	52

Information obtained from questionnaires sent to Iowa veterinarians revealed that 276 and 621 clinical cases of equine encephalitis were diagnosed respectively in 1962 and 1963. Data from the USDA, Animal Disease Eradication Division, for the years 1960 and 1961,[19] together with the questionnaire data for 1962 and 1963 indicated a total of 1,221 cases among horses in the 1960-1963 period (see Table 2). Two hundred and one cases occurred in the west central area of the state (see Figure 2). This exceeded the number of cases reported from any of the other eight areas.

Serologic studies in 1963 revealed rising WE CF antibody titers between acute and convalescent sera or high titers during convalescence in 22 of 29 horses. Since these blood specimens were drawn after the veterinarians had made a clinical diagnosis of the disease and since the laboratory findings agree so closely with the clinical impression, it becomes evident that the clinical diagnosis is in most instances accurate. These limited laboratory results with similar data from previous years indicate viral encephalitis in horses in Iowa was most likely due to WE virus.

A comparison of the reported incidence in man with cases in horses for the years 1960-1963 is shown in Table 2. The marked increase in equine cases recorded for 1963 may have been affected by more complete reporting of cases in horses that

* For the subject of this paper, the term "human viral encephalitis" will be used throughout to include encephalitis of unspecified etiology.

TABLE 2

REPORTED CASES OF ENCEPHALITIS (VIRAL AND TYPE UNSPECIFIED) IN MAN AND HORSES IN IOWA, 1960-1963

Year	Cases in Man‡ (June-Nov.)	Cases in Horses (Annual)
1960	10	293*
1961	2	31*
1962	19	276†
1963	9	621†
Total	40	1221

* USDA Reports.
† Iowa State Health Department Survey.
‡ Obtained from morbidity reports of the Iowa State Department of Health.

year because the questionnaire was sent to veterinarians at the end of 1963.

Attack rates in horses and man by areas are shown in Table 3. These were highest for both horses and man in the three western areas of the state. The west central area had the highest attack rate in man and the second highest attack rate in horses. A closer examination of the disease incidence in the west central area (see Table 4) reveals that the greatest attack rate in horses is in Greene County, followed by Carroll and Woodbury Counties. The greatest attack rate for man is in Carroll County, followed by Woodbury and Greene Counties.

DISCUSSION

A classical epizootic of equine encephalitis occurred in Kansas and Nebraska in 1912.[18] Since that time, the disease has been reported in horses rather regularly from many states.[19] The presence of WE virus was established in Iowa by Biester and Schwarte as early as 1939, when the virus was recovered from eight of 32 equine brains examined.[2] A 1940 report by S. H. McNutt indicates that WE was the only strain of arbovirus found in Iowa at that time.[16] The only reports of SLE in Iowa were in 1941. At that time results of serum neutralization tests done on human sera suggested that SLE was occurring along with WE.[10]

The largest recorded epidemic of encephalitis in man due to WE virus occurred in 1941 in North Dakota where 1,080 cases and 96 fatalities were reported.[14] Evidence indicates that the North Dakota epidemic occurred simultaneously with epidemics in South Dakota, Minnesota, and Iowa. Minnesota had a total of 389 cases in humans with 25 deaths. In Iowa 35 cases in man were reported, of which 31 (89 per cent) came from the three western areas of Iowa[6] (see Figure 3). In Iowa during the period June 1, 1941, through August 4, 1941, 1,100 cases of WE in horses were reported. Most of these cases were from the northern and western counties. Subsequent to 1941 WE has been reported in Iowa horses.[9]

Serologic data gathered from samples of equine blood sent to the Iowa State Hygienic Laboratory from 1950-1963 indicates that WE is the most frequent arbovirus infecting this host in Iowa. A significant rise of antibody titer for EE in acute and convalescent sera has never been demonstrated in horse or human sera sent to the State Hygienic Laboratory. The low titers of EE antibodies found in some equine sera is difficult to assess, especially

TABLE 3

ATTACK RATES OF ENCEPHALITIS IN HORSES AND ENCEPHALITIS OF VIRAL OR UNSPECIFIED ETIOLOGY IN MAN BY AREA IN IOWA, 1960-1963

	Horses			Man		
Area	Reported Cases 1960-1963	Equine Pop.*	Attack Rate Per 1,000 Horses	Reported Cases of Encephalitis of Viral or Unspecified Etiology (June-Nov.) 1960-1963	Human Pop.†	Attack Rate Per 100,000 Human Pop.
Western Iowa Total	505	23,411	21.6	31	676,145	4.6
N.W.	118	6,988	16.9	3	208,359	1.4
W.C.	201	8,878	23.0	26	279,294	9.3
S.W.	186	7,545	24.7	2	188,492	1.1
Central Iowa Total	433	29,718	14.6	3	970,341	0.3
N.C.	112	8,744	12.8	0	261,667	0.0
C.	167	9,740	17.1	3	538,478	0.6
S.C.	154	11,234	13.7	0	170,196	0.0
Eastern Iowa Total	283	27,995	10.1	6	1,111,051	0.5
N.E.	114	9,565	11.9	1	380,358	0.3
E.C.	102	9,841	10.4	4	497,585	0.8
S.E.	67	8,589	7.8	1	233,108	0.4

* 1959 U. S. Census of Agriculture, Department of Commerce, Vol I, Part 16—Iowa.
† 1960 Census.

in horses whose vaccination history is inadequate. A low CF antibody titer of 1:4 for EE is not uncommon in horses vaccinated with the bivalent vaccine.

The similar geographic distribution of human cases of WE in 1941 with cases reported as human viral encephalitis during the periods June through November 1960-1963, suggests similar conditions or factors may have existed during both periods. An examination of morbidity reports in the State Department of Health files of encephalitis in horses subsequent to 1941 indicates WE has been occurring in Iowa. The data for the years 1960-1963 reveals the disease is more prevalent in western Iowa.

Of the 52 encephalitis cases reported in man during the years 1960-1963, 40 occurred during the months of mosquito activity when most of the equine encephalitis cases also occurred. This further suggests some relationship between encephalitis cases in man and encephalitis cases reported in Iowa horses.

It is interesting to note that during the 1960-1963 period, the lowest number of reported human cases and the lowest number of reported equine cases occurred in the same year, 1961.

The authors express appreciation to the State Hygienic Laboratory for serologic testing and to the veterinary practitioners throughout Iowa for their cooperation.

ADDENDUM

Questionnaires were sent to practicing veterinarians in Iowa at the ends of 1964 and 1965 asking for the numbers of cases of encephalitis seen in horses. They reported seeing 1,287 clinical cases in 1964 and 812 in 1965. These reports suggest a continued high level of virus activity in nature.

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TABLE 4

ATTACK RATES OF ENCEPHALITIS IN HORSES AND ENCEPHALITIS OF VIRAL OR UNSPECIFIED ETIOLOGY IN MAN IN WEST CENTRAL IOWA COUNTIES, JUNE-NOVEMBER, 1960-1963

	Horses			Man		
West Central Iowa Counties	Reported Cases 1960-1963	Equine Pop.*	Attack Rate Per 1,000 Horses	Reported Cases of Encephalitis of Viral or Unspecified Etiology (June-Nov.) 1960-1963	Human Pop.†	Attack Rate Per 100,000 Human Pop.
Woodbury	40	1,117	35.8	16	107,849	14.8
Ida	1	476	2.1	0	10,269	00.0
Sac	5	586	8.5	1	17,007	05.9
Calhoun	8	864	9.3	0	15,923	00.0
Monona	4	675	5.9	0	13,916	00.0
Crawford	16	944	16.9	0	18,569	00.0
Carroll	35	649	53.9	7	23,431	29.9
Greene	42	653	64.3	2	14,379	13.9
Harrison	11	732	15.0	0	17,600	00.0
Shelby	20	792	25.3	0	15,825	00.0
Audubon	5	519	9.6	0	10,919	00.0
Guthrie	14	871	16.1	0	13,607	00.0

* 1959 U. S. Census of Agriculture, Department of Commerce, Vol. I, Part 16—Iowa.
† 1960 Census.

University of Iowa
College of Medicine

Clinical Pathologic Conference

RAYMOND F. SHEETS, M.D., Chairman
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SUMMARY OF CLINICAL FINDINGS

A 26-YEAR-OLD MAN was in good health until four weeks before his admission to University Hospitals when he noted nausea, anorexia, and fatigue. A week later he began to have two loose bowel movements per day. Cramping abdominal pain with each bowel movement occurred after another week, and dark red clotted blood was noted in the stools. He consulted a physician and was treated with pills and a liquid medicine, neither of which seemed to help. Three days later he consulted his family physician who found blood in the rectum on digital examination. He prescribed an injection, some pills, and a liquid medicine. Again the patient did not improve and was admitted to a hospital in his home town. He was having six to eight stools per day and constant lower abdominal burning pain. An upper gastrointestinal x-ray study was normal, and a barium enema showed colitis. He was treated with several antibiotic injections and injections, for three days, of cortisone. His strength and general sense of well being improved, but his bowel movements continued to be frequent and loose. The injections were stopped, and he was given tablets several times a day. His general condition remained about the same. He continued to have bloody stools, some anorexia, and low grade fever. After a seven-day hospitalization, he was transferred to University Hospitals.

The past history revealed no adult illnesses. As a child he had a functional heart murmur. He recalled mild diarrhea of short duration in the past, during periods of emotional stress.

Physical examination at the time of admission revealed a chronically ill, but cooperative and alert, young man. The weight was 116 pounds; the usual weight was 138 pounds. The temperature was 101°F. orally. The pulse was 100/min., and the blood pressure was 120/60 mm. Hg. The lungs were clear to percussion and auscultation. A grade 2/6 systolic murmur was heard at the apex. The second sound was louder at the pulmonic area than it was at the aortic area. There was no cardiac enlargement or overaccessibility. The liver and spleen were not palpable. The abdomen was soft and was not distended, but there was moderate tenderness in the left lower quadrant. Bowel sounds were very active. Digital rectal examination revealed tenderness and some bloody mucus.

The initial hemoglobin was 13 Gm. per cent. A white blood cell count was 16,550/mm^3 with 70 segmented and 3 band neutrophils. The erythrocyte sedimentation rate was 49 mm./hr. by the Westergren method. The urinalysis revealed a specific gravity of 1.030, pH of 6.0, 1-5 WBC per high power field, and it was otherwise negative. Serum sodium was 138, CO_2 was 25.8, potassium 4.0, and chloride 91 mEq./L. Serum albumin was 3.9, and serum globulin was 3.0 Gm. per cent. The alkaline phosphatase was 2.95 sigma units. The zinc turbidity was 6.7 units. The BSP was 12 per cent retention at 45 minutes. The prothrombin time was prolonged 2.4 seconds. Bleeding and clotting times were normal. Stools were negative on examination for ova and parasites. Bacterial culture revealed no enteric pathogens. On sigmoidoscopy the mucosa was granular and covered with a film of blood.

The patient had a fever of 101 to 101.6°F. orally, the first three nights in the hospital. He was treated with Azulfidine 8 grams per day for the first two days. Because no improvement was noted, 20 units of ACTH IV every 12 hours was given. On the fifth hospital day, atropine 0.6 mg. orally TID was begun because of abdominal cramps. The bowel movements decreased in number, but were still bloody. The patient lost an additional six pounds of weight during the first week of the hospitalization, but gradual symptomatic improvement was described.

The evening of the ninth hospital day, the patient complained of the sudden constant right flank pain with some right testicular discomfort and dysuria. Palpation revealed no change in the previous lower abdominal tenderness. The bowel

sounds were hypoactive. There was moderate costovertebral angle tenderness on the right. The urine contained 10-15 WBC, 1-2 RBC, and 2-3 granular casts/HPF. The patient was seen by a urologist that night. Excretory pyelography was normal. It was the consultant's impression that there was no urinary tract cause for the pain. The patient was treated with codeine. The next day he had relief with traction on the right leg, local pressure, and procaine infiltration. That same day, the tenth hospital day, the patient's temperature rose to 101°F. orally. During the morning of the eleventh hospital day he had four bloody stools in a one-hour period, became incontinent, and lost consciousness. His skin was ashen and mottled, his pulse rapid and thready, and his pupils were dilated. The blood pressure was 40 mm. Hg systolic. Electrolytes were drawn and were later reported as sodium 123, CO_2 23.2, potassium 4.8, and chloride 86 mEq./L. Blood sugar at the same time was 105 mg. per cent. With IV aramine the blood pressure rose for a few minutes, and the patient became more alert. He vomited green material several times, the blood pressure fell, and he again became unresponsive. Blood, nasal oxygen, and vasopressors resulted in no improvement, and he died one hour later.

CLINICAL DISCUSSION

Dr. J. D. Brown, Internal Medicine: The CPC today concerns a 26-year-old man who was admitted to University Hospitals in February, 1964. The discussant for the students is Mr. Stewart.

Mr. Keith Stewart, Junior Ward Clerk: We believe that the patient described in the protocol had nonspecific ulcerative colitis. The diagnosis of nonspecific ulcerative colitis is one of exclusion; exclusion of amebiasis, bacillary dysentery, tuberculosis, polyposis, diverticulitis, carcinoma, and specific causes of ulcerative colitis. Nonspecific proctitis and lymphopathia venereum must also be ruled out; this can be done by proctoscopic examination. On the patient described, the stools were negative for ova and parasites. The culture revealed no enteric pathogens. The barium enema showed colitis; no mention was made of diverticula. Sigmoidoscopy, which is the most direct diagnostic technic, showed a granular and friable mucosa—a characteristic picture for ulcerative colitis; no mention was made of polyposis. Other physical findings on this patient were compatible with the diagnosis: the frequent bloody stools, his weight loss of 22 pounds, the elevated temperature, the rapid pulse, and the leukocytosis. We believe the death of this patient was the result of acute fulminating ulcerative colitis, that the patient's bowel perforated on the ninth hospital day, when right flank pain was described, and that the patient died in septic shock. Cecil and Loeb state that 15 per cent of the cases of ulcerative colitis are of the acute fulminating type. A reference cited in Cecil and Loeb by Sleisinger and Law in the MEDICAL CLINICS OF NORTH AMERICA, on the medical management of ulcerative colitis, states that 30 to 50 per cent of people with acute fulminating ulcerative colitis die of their disease. The cause of death is irreversible shock, peritonitis, exhaustion, toxemia, or any combination of these. Most deaths occur within two years of the initial exacerbation of the disease, and most people that die of the disease die before the age of 30.

Dr. Brown: Thank you, Mr. Stewart, for a very straightforward opinion. We would like to ask Dr. Tidrick to discuss the case for the faculty.

Dr. R. T. Tidrick, Surgery: Junior Ward Clerk Stewart and I are in agreement, along with some others. You really can't get much controversy, unless we're walking into some unforeseen trap. It appears rather obvious that this is, and was, the course of events. We haven't, however, explained the mechanisms of what happened. The use of such old fashioned catch-all terms as he has retrieved from some ancient dusty medical text, such as "toxemia," "irreversible shock," and things like that, don't help us a bit to clarify these matters or to think more clearly in terms of mechanisms that may lead to such an unhappy state of affairs. He mentioned some statistics, and I wouldn't be able to add anything to them. He states that 15 per cent of the patients in this series, quoted in the textbook, were fulminating. One finds the reports from different institutions at considerable variance. One may suppose there is some form of case selection, depending upon the type of institution reporting; this may cause a low or high incidence of these patients who are very, very sick and who may fall in this group called fulminating. I wrote down some of these, too, and I noticed recently that Jan Prohaska and colleagues, at the University of Chicago, reported that 24 out of 127 surgical patients seen at the University of Chicago Clinics had acute dilatation with a diagnosis of *toxic megacolon*. That is extraordinarily high, and this merely points, I think, to the fact that this is a well-recognized center for referring these desperately ill patients. Likewise, over at their sister institution, Dr. Warren Cole and colleagues, at the University of Illinois, a little earlier, reported that 18 out of 57 consecutive patients treated or seen on the surgical service there had what we call one of the "big three" of the catastrophic complications—perforation, massive hemorrhage, or cancer. We'd like to know, of course, how common is the course of events which characterized this young man's abrupt terminal course of events. How often does this unfortunate state of affairs occur? If 15 per cent of them have fulminating ulcerative colitis, and if, of these, one-half die, it would be between 7 and 8 instances out of 100. I think this is higher than one should expect ordinarily in 100 patients

with ulcerative colitis. The deterioration rate is extremely variable. The striking thing about this patient whose history has been abstracted, is the short duration of his entire illness and the extremely short period of the terminal part of the illness. The course of events during the last 12 days of his life—how the time-line was constricted in this case—we'll talk a little bit about, in a moment. This short duration gives little latitude for making decisions or for observing the effects of therapy. We know in ulcerative colitis—if, indeed, this is what this young man had—that spontaneous remissions and spontaneous exacerbations are common, and that of the various catastrophes I have mentioned (the three principal ones that bring about the untimely death of such patients), two of them—that is, massive hemorrhage and perforation, do have some warning signals. These two disasters, therefore, merit our attention in terms of how we may recognize them.

In going back over this protocol, one can't find that there was much warning here. I didn't see this man and cannot say from first-hand observation, but certainly it would sound as if many of the usual signals which are of help in thwarting such a course of events were absent here. These complications of massive bleeding and free perforation, which are likely to bring about abrupt deterioration and death, are usually associated with extensive loss of mucosal surface and varying amounts of colonic wall necrosis. The colonic wall necrosis may be localized; it may be patchy; it may be patterned, usually in a characteristic linear manner, longitudinally arranged in juxtaposition to the taenial bands; or it may occur in generalized form over a wide extent. This latter is rather unusual. Usually, when such a patient is seen today there has been administration of massive doses of corticosteroid hormone. The patient's reaction to peritoneal irritation may be dampened and the elicitation of the physical signs altered, and the physician's interpretations of the signs hence may have to be modified with this in mind. The patient may have remote manifestations of the disorder which take the physician's attention away from lesions of the colon, from the primary locus, and it may help obscure the course of events. The patient may have so much intercurrent sepsis, including general invasion of the blood stream, that with either metastatic infection or general infection the course may be considerably altered. One suspects here, just as Mr. Stewart has outlined, that there was indeed a localized retroperitoneal perforation involving the structures of the right lumbar gutter, specifically the right ureter and the iliopsoas muscle group, and that there was a seeding constantly of the bloodstream via the portal tributaries and ultimately the systemic circulation, and that probably terminal or agonal blood cultures would have revealed organisms, and a diagnosis of septicemia could have been made. Possibly the pathologist will give us that information.

We have here a few photographs from the file. Most of these involve some of the various staff persons in this room—it's sort of a "roll call of disaster." I think these photographs illustrate a few of these points. This is a young man of 25 years who had perforation of his colon, and it simply shows the extent of violent inflammatory reaction, predominantly linear ulcerations, great injection and edema. With no difficulty in the back of the room, one can see the huge hole that was present in the left portion of the transverse colon in this 32-year-old woman. Notice here, too, the extremely ragged nature of the remaining colonic mucosa; much of it has simply fallen off the underlying colonic wall. We see, in the instance of massive hemorrhage, much the same gross changes—loss of mucosa, the often patterned, linear nature of the ulceration as you see here where it is completely denuded (the underlying wall) and deeply excavated. This next slide is of a 29-year-old truck driver whom one of our colleagues saw here. In fact, I believe he was the first patient here in whom a clinical diagnosis of acute magnesium deficiency was made. These that bleed violently, requiring emergency care, usually have no single focus of bleeding, but bleed diffusely. The whole colon is seeping. This demonstrates also the extreme thinness of the colonic wall. So it is no surprise that these two disastrous complications frequently coexist—both massive bleeding and perforation. Sometimes, as mentioned, the attention is diverted to complications elsewhere. This is a slide of a young lady whom a number of you saw. She had this very disturbing ulcerative stomatitis. She had a partial colectomy and improved for a time, then perforated some portion of her gastrointestinal tract proximal to it—presumably, we thought, either duodenum or proximal jejunum. We couldn't tell for sure. These deteriorating patients may draw your attention to the inter-current appearance of acute arthritis or various acute skin lesions. Now, let us discuss the warning signs. It seems to me that the thing one should stress is the warning nature of increasing ileus. This slide is from the record of a 40-some-year-old, obese, 230-pound diabetic lady who was on the medical service and who began, day by day, as she became more and more ill, to get increasing abdominal distention. This radiograph taken at the time of her barium enema, revealed more than the expected dilatation of the transverse and right portions of the colon. Two or three days later, she developed free perforation, and an emergency colectomy was done. This type of ileus, unfortunately, has picked up a name which is a poor one. It is called "toxic megacolon." It isn't "megacolon" in the proper sense, and I wish people would quit using the word "toxic" unless they are referring to snakes or something. It doesn't mean anything.

It is a form of ileus that is seen in acute ulcerative colitis, or colitis, that is associated with great loss of integrity of the mucosa and colonic wall. It ordinarily is most prominent in the transverse colon and it may involve all of the colon, or initially the transverse, and subsequently the ascending, and finally the cecal portions. It is usually, if it persists for very long, associated with either concealed or free perforation, sometimes with massive hemorrhage, or with combinations. It is a significant warning signal. In this case, perforation occurred, and here is a low-power view of the most heavily involved areas, prepared by Dr. Layton. This shows the ulcer here and the violent cellulitis. Dr. Davis, do you have any comment on this photomicrograph?

Dr. J. R. Davis, Pathology: It is an extensive ulceration, more deeply penetrating than the ulcers of chronic ulcerative colitis usually are. The basophilic change in the ulcer base indicates that the cellular infiltration reaches into the external muscularis. There is a serosal reaction, in addition. It is a severe transmural inflammatory change with abundant granulation tissue and a heavy infiltrate of mixed mononuclear inflammatory cells.

Dr. Tidrick: One should point out that there are some features that are of great help in the use of plain-film radiography. We do not have to use contrast media. I wonder about the radiographic appearance in the instance of this young man here, but I am informed that his barium enema was performed on the outside and that we do not have those films available. Sometimes the evidence of perforation is concealed and not readily evident on physical examination. Such a case here was a 17-year-old girl who was very ill and who developed signs of acute peritoneal irritation. We see in the plain films that there is a finely-bubbled area in the retroperitoneal tissues. She had an intramesenteric perforation. This slide is of a 22-year-old business college student whom some of you may recall from 3 years ago, who came in with a most enormous ileus and evidenced, in addition, a free perforation. Look at the gas shadows over the diaphragm: one hemidiaphragm here, one here, and the liver here. You can see it in lateral profile. He survived after an emergency procedure. He did, indeed, have free perforation. In summary, we would all be grateful if we could simplify or have some series of working rules which would help us determine what course of therapy we should employ in a patient who is sufficiently ill with ulcerative colitis to be admitted to the hospital. It seems to me that it could be considered from three standpoints. There are three *time zones* if you will, that we should think about. This is the *green zone.* During this period, when a patient is presumably sick enough to require hospitalization, he usually has severe diarrhea, may be passing small amounts of blood, may have a low-grade fever, some leukocytosis, be nutritionally decompensated, have hypoproteinemia, but his condition is changing insignificantly from day to day and, we hope, pretty soon it will improve. So in this zone, we don't have to think in terms of pressing surgical treatment, certainly not on any urgent or emergency basis. We then have what I think should be called the *amber zone.* There are several things that should lead us to think the patient is leaving the *green zone* and deteriorating. What are the things we usually see? One of the most significant is an increase in the number of stools, especially nocturnal passages. There may be an increase in the amount of blood in each stool. There doesn't have to be massive bleeding, but if in the course of 24 hours a patient passes 12 to 24 stools, this amounts to quite a bit. So an increase in the blood in the passages, an increase in the number of stools, elevation of temperature, and tachycardia, are the things that go with it, as well as progressive nutritional deterioration, an inability, in spite of all strenuous measures, to get enough calories and grams of protein and all the other things, and continuation of deterioration with loss of body weight. This means that when a patient is in this zone as compared with the *green zone,* the monitoring has to be almost hour by hour, not day by day. What are the things that differentiate the *amber zone* from the *red zone?* One we should be especially cognizant of, in a patient who is doing all the things just enumerated, is the appearance of increasing abdominal distention. It seems to me that that this, in itself, is a signal which should indicate, as a rule, that operation should be performed, either partial colectomy or whatever is indicated, before free perforation or massive hemorrhage occurs. So progressive abdominal distention that is finally represented as full-blown, so-called "toxic megacolon," is the first serious warning signal. The other significant warning signal here is bleeding to a degree that requires urgent transfusion of blood for stabilization. Usually, we think of this as in the neighborhood of 3 to 4 pints in 24 hours. Either of these occurrences, it seems to me, indicates that a state of emergency exists; this is an urgent anxious phase; this is the emergency phase, and an operation should proceed without delay. When the course of events leads, as in the case presented here today, to a constriction of all these time zones to within a very few hours, there really isn't time for reflection, proper observation, and waiting for the reporting of laboratory tests, and I believe there is no place in such a case for casting blame.

Dr. Brown: Thank you, Dr. Tidrick, for a very excellent discussion. Before Dr. Davis of the Department of Pathology lets us in on the surprises for today, I wonder if there are any questions anyone would like to ask Dr. Tidrick.

Audience: What do you think of the right-sided pain and the blood cells in the urine?

Dr. Tidrick: The answer to that was buried in too many other remarks. I think he had a concealed perforation involving the cecum or ascending colon, and I'm guessing and sticking my neck out, but I think it was located in the right lumbar gutter and that this abscess or violent reaction was in juxtaposition to the right ureter and iliopsoas muscle group.

Dr. E. L. DeGowin, Internal Medicine: I'd like to ask Dr. Tidrick if he is seeing more of these perforations since steroids are being used.

Dr. Tidrick: We do not have enough Pediatric patients in this group to say in relation to children, but in terms of the adult patients I think we are observing a higher percentage of ulcerative colitis patients, admitted to the University Hospitals today, as compared with 10 or 15 years ago, who are seriously or dangerously ill. I think this probably indicates that more of the mild ones and maybe the equivocal ones, as to whether they need hospitalization, are being treated locally. We certainly have a definitely higher percentage of those coming for surgical treatment who are on the urgent or emergency list. For instance, Dr. DeGowin, we have operated upon as many with free perforation or massive hemorrhage between the autumn of 1962 and January 1966, as we did in the preceding 10 years. Dr. R. C. Hickey and Dr. Layton and I reviewed these, and we had 13 or 14 free perforations in the preceding 10 or 11 years, and we have already had that many in the few years since. This may not be too significant statistically, but I think it represents a change in the admission picture. Whether this is due to a more widespread use of steroid therapy, I can't say.

Dr. Brown: Dr. Davis will give us the autopsy findings.

Dr. J. R. Davis, Pathology: The underlying disease process in this severely emaciated patient was ulcerative colitis. The large intestine was involved from the level of the ascending colon to the rectum. There was blood-streaked mucus and fibrinous exudate on the mucosal surface, and multiple irregular-sized and shaped ulcers, but no extensive intraluminal blood. Mucosa between ulcers was red and granular. Many ulcers were superficial with ragged edges and peripheral undermining; a few ulcers were deep, based in the external muscularis. There was no perforation. Perivascular extensions of the inflammatory reaction coursed into the subserosa, and mesothelial proliferation occurred on the serosal surface. The 150 ml. of peritoneal fluid was clear and serous. The inflammatory reaction at the ulcer margins consisted of fibrinopurulent exudate in which many bacteria were demonstrated. Neutrophils were predominant, but a mixture of mononuclear cells were more numerous in the granulation tissue which rimmed the areas of suppuration. An occasional thrombosed arteriole was present in the submucosa, perhaps a reflection of the severity of the local inflammatory reaction.

The initial photomicrographs emphasized some of the unusual features of the colonic disease in this case. Less conspicuous but well developed were the alterations more commonly associated with chronic ulcerative colitis. The bulk of the inflammatory reaction was confined to the mucosa and submucosa. The latter was extensively thickened by edema, fibrosis, and granulation tissue content. Crypt abscesses occurred at the depths of the colonic glands and penetrated into submocosa with undermining of adjacent mucosa. External muscularis was hypertrophied; at some levels the colon wall was 1 cm. thick. The lumen lacked both segmental dilatation and constriction. Serosa and mesentery were not thickened or grossly inflamed.

A plausible interpretation of the pathogenesis would identify the underlying disease to be chronic ulcerative colitis, but with superimposed pyogenic infection. That *Staphylococcus aureus* might be the causative agent in the secondary infection is likely. It was cultivated from stool at autopsy, and gram positive cocci were bountiful in the ulcers. Secondary pyogenic infection of the ulcerative colitis would account for the suppurative character of the inflammation and be more consistent with the clinical course in this case. It is unlikely that the colonic disease had a bacterial etiology throughout its course. Neither the clinical manifestations nor the anatomic changes are characteristic of acute staphylococcal or pseudomembranous enterocolitis. No amebae were present. Myeloid hyperplasia of bone marrow and the occurrence of extramedullary myelopoiesis in liver and spleen indicate systemic reactivity to severe infection.

The cause of death is attributed primarily to bilateral adrenal necrosis. Each adrenal gland weighed 34 gm. including abundant periadrenal adipose tissue and blood clots, so the weight of native adrenal tissue is uncertain. The right adrenal was hemorrhagic grossly. Both glands exhibited massive necrosis of both cortex and medulla. That the necrosis was recent is indicated by the extensive coagulation necrosis lacking reparative phenomena. A few islands of apparently viable zona glomerulosa remained. Neither the recent, unorganized thrombi filling medullary veins nor necrotic and hemorrhagic adrenal gave indication of a septic or inflammatory etiology. Blood and spleen cultures at necropsy were negative for bacterial growth. Fat necrosis occurred in periadrenal tissue. The estimated duration of the adrenal lesion would be a few days at the greatest.

There are three acknowledged types of acute destructive lesions of the adrenal: (1) neonatal, (2) Waterhouse-Friderichsen syndrome, and (3) sporadic necrosis. The case under discussion, which

lacks the clinical manifestations and septicemia characteristic of Waterhouse-Friderichsen syndrome, most likely falls into the third category. Sporadic massive adrenal necrosis is usually bilateral, usually fatal, and usually associated with another major disease of diverse types. Frequently, adrenal vein thrombosis is found, but whether thrombosis is secondary to gland necrosis or thrombosis triggers the ischemic process is speculative. Similarly, the factors initiating thrombosis in the latter instance are unclear, but often "toxemia" is implicated.

Dr. Brown: Thank you. This is a very confusing case. I think there are a lot of questions that will come up. I would like to ask Dr. Stone if he would tell us whether or not he thinks this patient had acute adrenal insufficiency, and if so, did the ACTH infusion have anything to do with it?

Dr. D. B. Stone, Internal Medicine: My answer is "yes" to both questions. As the purposes of these exercises are to examine and interpret data and to consider alternative solutions, I should like to reexamine the protocol and submit a completely different interpretation of this man's illness. This interpretation is based on the concept that the patient might have had adrenocortical insufficiency before he came into the hospital. Let us examine the protocol to find what is consistent or inconsistent with such an interpretation. The five cardinal manifestations of Addison's disease are weight loss, pigmentation, hypotension, fatigue, and gastrointestinal symptoms. This man had lost weight before admission to the hospital. He was not observed to be pigmented; this does not necessarily refute the possibility that he had Addison's disease, for even astute clinicians sometimes fail to recognize pigmentation. His blood pressure was within normal limits. Again, a normal blood pressure does not refute the possibility of adrenocortical insufficiency. Patients with Addison's have a decrease in blood pressure; this man may have had a higher blood pressure before developing adrenocortical insufficiency. Furthermore, some patients with Addison's disease have an apparently normal blood pressure, but have a fall of blood pressure on standing. Unfortunately, it is not known whether this man had orthostatic hypotension. He was tired and lethargic. Moreover, he had gastrointestinal symptoms, including anorexia, nausea, and severe diarrhea. Thus, the patient had three of the five cardinal manifestations of adrenocortical insufficiency, and I suggest that we cannot discard the interpretation that he had Addison's disease, for we remain uncertain about the pigmentation and the blood pressure.

As you continue to examine the protocol, you will read that he was treated with cortisone and that "his strength and general sense of well-being improved." This is also consistent with the diagnosis of adrenocortical insufficiency.

Later, he received ACTH, and at about this time he became worse. This sequence of events is also consistent with the interpretation that he had adrenocortical insufficiency. People with Addison's disease often get worse if they receive ACTH. Dr. Jewel and I reported examples in a series of 17 patients suspected of having adrenocortical insufficiency.[1] All these patients had received corticotropin diagnostically, but none of them had received 9-a-fluorohydrocortisone. Two of the 17 died under circumstances which, we believed, must be attributed to the use of corticotropin.

If one reviews the course of the illness, therefore, one finds several pieces of evidence that are consistent with the interpretation that he might have had adrenocortical insufficiency. He undoubtedly had three of the five cardinal manifestations before admission. During the time he was in the hospital, his diarrhea caused him to lose water and electrolytes, and this would have made him worse. He received exogenous corticotropin, and this also might have made him worse. On the ninth hospital day he complained of sudden pain in the right flank. Rogoff has described flank pain occurring in patients with adrenocortical insufficiency.[2] Berte reported 24 adults with spontaneous adrenal hemorrhage; six of these patients had pain in the flank.[3] As the patient became more ill, other events occurred that make one suspect adrenocortical insufficiency. His blood pressure fell. The sodium/potassium ratio decreased; towards the end of his life the sodium/potassium ratio was approximately 26. He had a leukocytosis. I would have suspected him to have had an increased number of eosinophiles in the blood. Was an eosinophile count recorded?

Dr. Brown: Not an absolute count. There were two differentials in the chart. One was 1 per cent and one was 6 per cent. The total white count was 21,000.

Dr. Stone: With this total white count, therefore, he had 210 eosinophiles per cubic millimeter. A concentration of eosinophils of more than 60 is also consistent with the diagnosis of adrenocortical insufficiency. When you consider these data, I submit that they are consistent with the interpretation that this patient entered the hospital with adrenocortical insufficiency and diarrhea, that he unfortunately developed a secondary, superimposed bacterial infection, that his subsequent downhill course was caused by the loss of fluid and electrolytes, that this was hastened by his receiving ACTH, and that the terminal event was complete adrenocortical failure.

Dr. Brown: Thank you. Dr. Stone was "primed" on this. He knew the diagnosis. But I don't know if we know the diagnosis for sure; I don't know what caused this boy's death. Are there any questions?

Dr. C. E. Nelsen, Pediatrics: Were blood cultures drawn when he was alive?

Dr. Brown: Not to my knowledge. The blood cul-

ture at autopsy was sterile. They cultured Staphylococcus from the bowel. Dr. Davis, didn't they culture a few organisms from the adrenals also?

Dr. Davis: From the adrenals at autopsy there were cultured *E. coli, Aerobacter aerogenes,* and *Clostridium* species, probably all contaminants. In reference to Dr. Stone's alternative interpretation, it should be indicated that both the clinical and the pathological findings are consistent with a very recent occurrence of acute adrenal failure. There have been some 60 cases of sporadic adrenal necrosis in which abdominal pain is a frequent heralding clinical symptom. The pain may be limited to the epigastrium, an upper quadrant, or the flank. The change in the adrenal glands is compatible with very recent necrosis, not of weeks in duration.

Dr. Stone: Berte referred to patients with radiating pain.[3] If you think in terms of an alternative interpretation, might it be conceivable that this man had partial adrenocortical insufficiency for several weeks? He was sick but managing to keep alive. After he entered the hospital he received ACTH: one would expect that giving exogenous corticotropin would suppress his own endogenous corticotropin production. Towards the end of his illness, the exogenous corticotropin secretion had been inhibited, so that his adrenal cortices no longer received any stimulation, and then, perhaps, he had a spontaneous adrenal hemorrhage. I do not suggest that this course of events is extremely likely, but I think it might be a reasonable interpretation of what happened.

Dr. R. F. Sheets, Internal Medicine: Are you proposing that this man didn't have ulcerative colitis at all?

Dr. Stone: To be truthful, I have tried to develop my theme to encourage flexible thinking. I propose that it is improbable but not impossible that the underlying reason for this man's diarrhea was adrenocortical insufficiency, and that, superimposed on this, he developed more diarrhea as a result of secondary pyogenic infection.

Dr. Davis: Perhaps I didn't make myself clear. At necropsy, there were changes in the colon indicative of a pyogenic infection, but background changes occurred which are consistent with a diagnosis of nonspecific ulcerative colitis. The changes of the latter are too extensive and well developed to be considered a recent change, but it is difficult to estimate the duration of the secondary infection.

Dr. Stone: May I ask a question? In the precortisone era, patients with Addison's disease sometimes died with clinical manifestations similar to those that occurred in this patient. Do you know the pathological appearance of the gut in patients who died with Addison's disease and severe diarrhea?

Dr. Davis: No, I don't.

Dr. Brown: I find it rather difficult to refute the pathological changes in the bowel, and I suppose—though Dr. Stone's idea is an intriguing one—this is really chronic ulcerative colitis, and that for some reason, this man infarcted his adrenals. Dr. Tidrick, have you seen this in association with ulcerative colitis?

Dr. Tidrick: I don't know. We have seen people who have behaved this way. We expected to see adrenal necrosis or atrophy and were disappointed if we didn't. We postulated this a time or two. May I refresh your minds about one that we didn't get settled a year or two ago. It was a woman patient on the Medical service, 48 or so years of age. Maybe we should go back to that. I thought we terminated the discussion too soon, possibly because we didn't have Dr. Stone that day, although we had someone else who raised some questions which were much like these that have been raised. I wish Dr. Clifton were here, because he saw this lady about 2 hours before her death. He made the postulation then, Dr. Stone, that this patient had had acute adrenal insufficiency. She came into the Medical service violently ill and lived a very short time and had the picture of septicemia in the last few hours of her life. She didn't respond to blood transfusions and adrenocortical steroids and the other things. We saw this curious rash, as shown on this slide. This was taken at autopsy about two or three hours after we first observed it in the suprapubic area. By the time of death, she had similar changes elsewhere: a fine petechial rash on the arms, and a few small blisters, such as we see with Pseudomonas aeruginosa septicemia at times. They did culture gram-negative organisms from her blood stream, but as I recall, we didn't prove that this was *the* organism. She had some changes in her adrenals, but they weren't massive necrosis like what we saw today. Instead, as you will see on this next slide, we saw these changes in the colon, and these are about of the same degree of severity as we noted in the young man today. The next slide shows that the most striking changes were in her liver. It was big and greasy and showed obvious severe fatty metamorphosis, but not widespread liver necrosis. We saw in the microscopic sections of this some mid-zone necrosis, as I recall, but not very striking. This lady and the patient today exemplify so many of the things which are not clearly explained about the terminal course of these patients. Dr. Stone's proposition here is a very interesting one. Probably this thing that people call ulcerative colitis is the final common pathway, not highly specific, for a number of different kinds of insult that have in common ulceration of the colon and certain distinguishing gross and microscopic features, but it doesn't indicate a unity of cause. Maybe Dr. Bean has some comments on this?

Dr. Stone: With deference and respect to you, sir, I suggest that you have just put forward one of the famous "Tidrick gram-negative herrings." You

make it clear that the woman you describe did not have adrenocortical insufficiency. It may still be possible, however, that the man we are discussing did have adrenocortical insufficiency.

Dr. W. B. Bean, Internal Medicine: I have nothing profound to offer. The problem might be resolved in this person by saying that he did, indeed, have ulcerative colitis. This was a major part of his problem. The treatment with steroid hormones rendered his adrenals weak from overresting. Terminally, for reasons that are not clear, he developed an acute Addisonian-like crisis. The question that was asked some time back was, what did the gut look like in people who died of Addison's disease—and most people in the old days who had it did die of it, during the era when there was nothing to do for them. Later, they could be fed salt. Then after a while, DOCA was added, then there was a more active adrenal extract, and finally cortisone was added. But in those persons with Addison's disease who did die before we had much to give them, especially before we had any corticosteroid hormones, there was no constant acute lesion in the colon. The gut, if it had changes at all, and there often were changes, tended to be atrophic. A sort of atrophic colitis was fairly common, although there was no diagnostic or characteristic lesion in the gut. Looking at somebody with just Addison's disease and seeing the bowel as it was here, no one would reckon that Addison's disease could have done that to the bowel. So I think he had ulcerative colitis without any question, and I think he died with, and perhaps of, acute adrenal insufficiency plus all the other troubles he had.

Dr. Davis: Experimentally, the prolonged administration of large doses of ACTH plus endotoxin can produce death. Might such a mechanism be operative in this case, Dr. Stone?

Dr. Stone: Long-term therapy with exogenous corticotropin often decreases the responsiveness of the adrenal and pituitary glands. Reed and others reported that corticotropin therapy altered the response to mepyrapone, suggesting a general inhibition of steroid biosynthesis in the adrenal cortex, or inhibition of the hypothalamus or anterior pituitary, or both.[4]

Audience: I wonder if Dr. Stone would recommend, when we're treating patients with ACTH such as patients with ulcerative colitis like this, that Florinef be given?

Dr. Stone: I wonder whether it is wise to use ACTH therapeutically. I am not competent to discuss the treatment of ulcerative colitis, but I have not learned of the advantage of ACTH over steroids, and I have often wondered if it would not be wiser to use steroids, such as cortisone or similar drugs, rather than using ACTH. If you elect to use ACTH in the treatment of patients with ulcerative colitis, I believe it is not necessary to give Florinef (9-a-fluorohydrocortisone) so long as the patient does not have adrenocortical insufficiency. Even a patient with previously normal adrenal glands may be in danger, however, when you stop giving exogenous ACTH after prolonged ACTH therapy. The giving of exogenous corticotropin may result in suppression of endogenous corticotropin production; when you stop giving exogenous ACTH the patient may therefore develop the clinical manifestations of secondary adrenocortical insufficiency. Thus it seems desirable to observe patients carefully if you decide to stop giving a prolonged course of ACTH.

Audience: Dr. Bean said that the patient might have ulcerative colitis *and* Addison's disease. It seems to me that if one has a 25-year-old male who had no real prior problems, to give him two diseases, both systemic and both chronic, coming to a head, would seem to me to be too much to expect.

Dr. Brown: I think one would have to say that he had ulcerative colitis and developed acute adrenal insufficiency, secondary to thrombosis of the medullary veins. The million-dollar question is why he developed the thrombosis and hemorrhagic necrosis. I don't think we can answer this.

Audience: Did Dr. Davis comment on the age of the coagulation necrosis, etc., in the adrenal? Can anyone tell how long his adrenals had failed?

Dr. Davis: The bland nature of the adrenal coagulation necrosis, without the inflammatory infiltrate, strongly suggests a recent lesion of a few days' duration being the upper limit of expectation. This would correlate well with the clinical picture of flank pain and sudden shock. There is no way of knowing whether his adrenal cortex was depleted or abnormal in any other way before infarction.

SUMMARY OF NECROPSY FINDINGS

Anatomic diagnoses:

1. Adrenal infarction (massive, bilateral, and recent) with adrenal vein thrombosis.
2. Chronic ulcerative colitis.
3. Staphylococcal colitis (secondary to 2).
4. Myeloid hyperplasia, bone marrow.
5. Extramedullary myelopoiesis, liver and spleen.

STUDENTS' DIAGNOSES

1. Nonspecific ulcerative colitis.
2. Perforation of the colon.
3. Shock.

DR. TIDRICK'S DIAGNOSES

1. Fulminating ulcerative colitis.
2. Perforation of the colon.

REFERENCES

1. Stone, D. B., and Jewel, J. G.: Danger of corticotropin in Addison's disease. Arch. Intern. Med. (Chicago), **107**:372-374, (March) 1961.

2. Williams, R. H., editor: Textbook of Endocrinology, 3rd edition. Philadelphia, W. B. Saunders Co., 1962.

3. Berte, S. J.: Spontaneous adrenal hemorrhage in adult: literature review and report of two cases. Ann. Intern. Med., **38**:28-37, (Jan.) 1953.

4. Reed, P. I., Clayman, C. B., and Palmer, W. L.: Adrenocortical and pituitary responsiveness following long-term, high dosage corticotropin administration. Ann. Intern. Med., **61**:1-10, (July) 1964.

Postgraduate Course At U. of I. Nov. 18-20

The Departments of Pediatrics, Radiology and Urology at the U. of I. College of Medicine will present a postgraduate course on November 18, 19 and 20 in Iowa City. The registration fee for the conference is $15. The program is accredited for 15 hours by the American Academy of General Practice.

Dr. Otto L. Lilien, professor and head of the Division of Urology, Upper New York State College of Medicine, Syracuse, N. Y., will be a guest faculty member at the conference.

PROGRAM

UROLOGY

Friday, November 18, 1966

1:00 p.m. REGISTRATION
1:30 p.m. Cancer of the Bladder: Problems in Diagnosis
- A. Urologic Approach to Diagnosis—Rubin H. Flocks, M.D.
- B. Roentgenologic Approach to Diagnosis —Steven H. Cornell, M.D.

2:15 p.m. Cancer of the Bladder: Problems in Treatment
- A. Surgical Approach to Treatment—Mark A. Immergut, M.D.
- B. Roentgenologic Approach to Treatment—Howard B. Latourette, M.D.

Discussion to be opened by Rubin H. Flocks, M.D.
3:00 p.m. Break
3:15 p.m. Pyelogram Clinic—Staff, Department of Urology
4:30 p.m. Business Meeting, Iowa Urological Society
6:30 p.m. Social Hour and Dinner, Iowa Urological Society, University Athletic Club

Saturday, November 19, 1966

UROLOGY AND PEDIATRICS

9:00 a.m. The Present Status of Treatment of Extrophy of the Bladder—David A. Culp, M.D.
9:30 a.m. Intersex Problems in Children—Raymond G. Bunge, M.D.
9:50 a.m. Discussion to be opened by Charles H. Read, M.D.
10:00 a.m. Coffee Break
10:20 a.m. Surgical Treatment of Ureteropelvic Obstruction—Rubin H. Flocks, M.D.
10:40 a.m. Discussion to be opened by David A. Culp, M.D.
10:50 a.m. Problems in Diagnosis and Treatment of Testicular Torsion—Mark A. Immergut, M.D.
11:20 a.m. Pyleonephritis in Children—Donal Dunphy, M.D., and David A. Culp, M.D.
12:00 Luncheon

PEDIATRICS, RADIOLOGY AND UROLOGY

1:00 p.m. Management of the Child Who Has Bladder Neck Obstruction—Panel: Donal Dunphy, M.D., Dale E. Fuller, M.D., Mark A. Immergut, M.D.
2:00 p.m. A Demonstration of Countercurrent Aspects of Renal Tubular Function (Motion picture and discussion)—Otto L. Lilien, M.D.
2:45 p.m. Break
3:00 p.m. Current Experience in the Treatment of Wilms's Tumors and Neuroblastomas—Panel: Robert E. Carter, M.D., Rubin H. Flocks, M.D., Howard B. Latourette, M.D.
4:00 p.m. Business Meetings
Iowa Chapter, American Academy of Pediatrics—Rm. E-405
Iowa Radiologic Society—Cardioscope Room
6:30 p.m. Refreshments and Banquet—All three groups—University Athletic Club
Speaker: Otto L. Lilien, M.D. "The Evolution of the Organized Multicellular Organism"

Sunday, November 20, 1966

PEDIATRICS AND RADIOLOGY

PEDIATRIC NEUROLOGY

Moderator: John C. MacQueen, M.D.

9:15 a.m. Intracranial Tumors in Children
- A. Clinical Approach to Diagnosis and Management—William E. Bell, M.D.
- B. Roentgenologic Contributions to Diagnosis—Eugene F. VanEpps, M.D.
- C. Radioisotopic Approaches to Diagnosis —Robert T. Morrison, M.D.
- D. Contributions of Radiation to Treatment—Howard B. Latourette, M.D.

10:45 a.m. Coffee Break
11:00 a.m. Heads Large and Small—William E. Bell, M.D.
12:00 Luncheon

PEDIATRICS AND RADIOLOGY

A POT POURRI OF PEDIATRIC RADIOLOGY

Moderator: Donal Dunphy, M.D.

1:15 p.m. Exploring the Pediatric Chest Film—Albert C. Selke, Jr., M.D.
2:00 p.m. Clinical and Radiologic Approach to the Diagnosis of Obstructive Gastrointestinal Lesions—Robert T. Soper, M.D.
2:45 p.m. Break
3:00 p.m. Skeletal Trauma in Children—Michael Bonfiglio, M.D.
3:45 p.m. Angiocardiographic Diagnosis of Cardiac Diseases in Children—Peter Vlad, M.D.
4:30 p.m. Adjournment

Emergency Care of the Sick and Injured

A Symposium for Physicians, Paramedical and Emergency Unit Personnel is scheduled in Iowa City on November 1 and 2. The two-day program —entitled "Emergency Care of the Sick and Injured"—is under the sponsorship of the State Department of Health, the Department of Surgery of the U. of I. College of Medicine and the State Committee on Trauma of the American College of Surgeons.

The symposium will be divided into two parts. The first is to be for physicians only and will acquaint participants with the most recent developments in five areas of acute emergency due to trauma. The second part, for non-physicians, will deal with types of emergency medical equipment required, their proper operation, the maintenance of vital body functions until the patient can be transported to further medical care, and the most recent knowledge on the proper methods of transport of such patients.

It is hoped that physicians will attend both portions of the course so that they might serve as instructors at future regional programs.

Guest faculty will include Robert W. Gillespie, M.D., Instructor in Surgery, University of Nebraska; Robert H. Kennedy, M.D., New York City, Director, Field Program, Committee on Trauma, American College of Surgeons; and Robert D. Rowley, M.D., Burlington, Chairman, State Committee on Trauma, American College of Surgeons.

There is no registration fee, and the program is accredited for nine and a half hours by the American Academy of General Practice.

November 1, 1966

PART I—PROFESSIONAL SESSION

Chairman: Dr. J. L. Ehrenhaft

3:00 p.m. Introduction to Conference, Guests and Local Participants

3:15 p.m. Improvements in Pulmonary Ventilation—Patient Monitoring and Advances in Equipment—Dr. W. K. Hamilton and Staff

3:45 p.m. Trends in Recognition and Management of Shock
- Recognition of Types and Causes—Dr. N. P. Rossi
- Place of Cardiac Augmentation—Dr. C. A. Selmonosky
- Trends in Treatment—Dr. E. E. Mason

4:15 p.m. Chest Injuries
- The Unstable Chest Wall—Dr. J. B. Flege, Jr.
- Masked Intrathoracic Injury—Dr. M. S. Lawrence

4:45 p.m. Does "the Battered Child" Masquerade as Ordinary Trauma?—Dr. R. W. Gillespie

6:15 p.m. Reception

7:30 p.m. Dinner

Chairman: Dr. S. E. Ziffren

8:30 p.m. After Dinner Discussion and Conference—Dr. R. H. Kennedy

Wednesday, November 2, 1966

PART I—PROFESSIONAL SESSION (CONTD.)

Chairman: Dr. H. B. Locksley

8:30 a.m. The Differentiation of Operative and Non-operative Head Trauma—Dr. G. E. Perret and Staff

9:00 a.m. Immediate Treatment of Thermal Burns: Trends in Management—Dr. S. E. Ziffren, Miss Ruth A. Ulfers and Staff

9:30 a.m. Intermission

PART II—COMBINED CONFERENCE

Chairman: Dr. R. E. Carter

10:00 a.m. Introductions and Purposes

10:10 a.m. What Constitutes Proper Ambulance Transport?
- Transport Problems in Acute Shock and in the Presence of Multiple Injuries—Dr. E. W. Green
- Positioning and Transport of Patients with Acute Head and Spinal Injuries—Dr. H. Nishioka
- What Constitutes Proper Ambulance Equipment—Dr. R. W. Gillespie
- Airway Management in Transport—Dr. W. K. Hamilton

Discussion—Questions and Answers

Chairman: Dr. R. H. Kennedy

11:30 a.m. Community Programs: Their Purpose and Scope
- The Teaching of Immediate Care: Experience in Nebraska—Dr. R. W. Gillespie
- Resource Support and Materials from Private and Public Agencies—Miss Helene Deming
- The Trauma Committees and Professional Support—Dr. R. D. Rowley

Summary—Questions and Answers

12:30 p.m. Lunch

Chairman: Dr. J. A. Buckwalter

1:30 p.m. Obstetrical Emergencies—What to Do—Dr. C. P. Goplerud

2:00 p.m. Emergency Control of Hemorrhage—Dr. R. T. Tidrick and Staff

2:30 p.m. Questions and Answers

2:45 p.m. Intermission

3:00 p.m. Critique of Materials and Technics in Teaching Emergency Care and Transport of Acutely Ill and Injured—Dr. R. E. Carter, Miss Deming, Dr. R. W. Gillespie, Dr. R. H. Kennedy, Dr. J. A. Gius, and Dr. L. Den Besten
- Models and Manikins
- Simulated Emergencies
- The Preparation and Use of Low Cost Motion Pictures
- Film Library Resources
- TV—Live and Video Tapes
- Group Conferences
- Assisting Groups and Agencies
- Course Content in the Light of Resources Available

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Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose ond amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operotion of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

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Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may accur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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USE OF THE PLACEBO IN ARTHRITIS

In the treatment of a chronic disease such as arthritis in which exacerbations and remissions are so characteristic, it is difficult to assess the efficacy of any form of therapy. Today the clinician is confronted by a variety of new remedies and it is his obligation to decide whether a drug should be used and to weigh the possible benefits against the possible harmful effects. A recent report of a study from the Cook County Hospital and Hektoen Institute for Medical Research* on the role of the placebo in the management of arthritis is pertinent to this problem.

Upon entry of patients to the Arthritis Clinic and during the first week of work-up, laboratory tests, x-rays, etc., they were given a week's supply of placebo tablets consisting of 0.3 Gm. of lactose, one tablet to be taken after each meal. All other medications were discontinued. This was done to establish a base line by which the benefits of therapy could be measured and also to determine placebo reactors. Upon their return to the Clinic in a week, if improvement was claimed, they were given another week's supply of the "white tablets." Upon each return to the clinic, if improvement continued, the placebo tablets were again prescribed. In the event there was no benefit from the placebo the patient was then given a weekly injection of 1.0 cc. of normal saline solution. If there was no benefit noted from the injected placebo then conventional arthritic drugs, physiotherapy, and hygienic measures were employed. During the weekly visits to the clinic the patients were interviewed by one of seven physicians. The physicians tried to be as objective as possible and to avoid asking leading questions. In assessing the response to the placebo, equivocal or apologetic replies were considered as placebo failures.

A high percentage of patients (75 per cent) with rheumatoid arthritis immediately resisted the placebo. Among the patients with degenerative arthritis the placebo was resisted by 52 per cent of the group.

Among the patients who accepted and participated in the use of the "white tablet" or the weekly injection of saline the improvement was largely subjective. Objective improvement was observed, however never to the degree that symptoms were relieved. A lowering of the sedimentation rate always lagged considerably behind other evidences of remission. The authors point out that there is a strong subjective element in stiffness and tenderness though swelling is purely objective. Many of these patients asserted that with relief from the arthritis they felt better, ate and slept better. It was not unusual for patients to complain that the lactose tablets caused the same symptoms of nausea and tinnitus that they had experienced with aspirin.

If the dose of saline was increased above 1.0 cc. there was no improvement in the results. Among patients noting benefit from the injection approximately one-half reported that it occurred immediately and one-half observed results in four to six hours. One-third of these patients stated that relief from the injections lasted only 72 hours and made the effort to return to the clinic twice weekly.

The results found in this recent study confirmed that of a previous report published by the authors in 1959. A total of 271 patients, 103 males and 168 females, received placebo for periods varying from one week to 10 years. Of this number, 245 had degenerative arthritis and 58 per cent improved on three lactose tablets daily. In 131 patients the benefit was minimal or was considered a placebo failure. This latter group then received weekly saline injections and 69 per cent of them improved.

There were 101 patients with rheumatoid arthritis, of whom 49 per cent improved while taking the "white tablets." Of those patients who failed to improve on the tablets, 63 per cent were objectively or subjectively improved by the saline injections.

Fifty patients were diagnosed as having fibrositis, arthralgia or low backache of skeletal origin and one-half of them improved on lactose tablets. Seventeen of the 25 unimproved patients claimed they were improved following saline injections.

In discussing the propriety of using placebo medication, the authors point out the need for a base line to judge the effectiveness of any subsequent antiarthritic measures. Though the precise reasons for the placebo effect are unknown, the physician's personal interest in the patient and his complaints are major factors. The authors remind us of the work by Dr. Herrick many years ago. Dr. Herrick prepared stool cultures of colon organisms patterned after the work of Russell Cecil. This vaccine was given to 250 patients with all forms of arthritis with a reported cure rate of 64 per cent.

From long experience in the Arthritis Clinic, the attending physicians continue to be impressed by the remissions and exacerbations which characterize the natural history of arthritis. If a patient is entering a period of remission and a potent drug or any other measure is administered, the resulting remission may be ascribed to the drug whereas the remission would have occurred had nothing been given. Placebos satisfy the desire of the pa-

* Thrift, C. B. and Traut, E. F.: Further studies on placebo management of skeletal disease. ILL. MED. J., **129**:683-685, (June) 1966.

tient for immediate treatment and if no benefits result other forms of treatment are instituted immediately.

In justification for the use of placebos, the authors relate their experience with thousands of patients who reported on the negative effects of a whole mass of empirically used chemicals and procedures, many of which are potentially harmful. "In the best interest of the patient he should be given the drug or chemical with the least iatrogenic effect to bring about such a remission."

The authors conclude that from their studies it is necessary to use placebos in the study of drug effects. In their 10 year study they have found that the number of rheumatoid patients benefiting from placebos compares favorably with the results by many other methods of therapy reported from other centers. The benefits observed in the Cook County Hospital study were sufficiently evident and of such significant degree in a large enough group of patients to justify the continued use of the placebo.

BACTERIAL ENDOCARDITIS

A study* on the subject of bacterial endocarditis from the Massachusetts General Hospital reports the surprising information that despite this era of chemotherapy the number of cases of this disease remain about the same, year after year, and that the survival rate has improved only slightly, if at all, during the last 20 years. However, it does reveal that there have been changes in both the host and the causative organism which have influenced the development and the outcome of this formidable infection.

Among the changes which have occurred, the decline in the incidence and severity of rheumatic fever is noteworthy. There is an increased incidence of endocarditis in the elderly with no history of valvular heart disease. The increased use of corticosteroids, of immunosuppressive agents and of extensive radiotherapy are factors which have influenced host resistance and have increased the hazard of bacterial endocarditis. New technics in cardiac surgery have introduced another opportunity for the development of the disease. The increased number of resistant organisms resulting from the use of multiple antibiotics have added to the problem.

The present study consisted of a review of the records of all patients with bacterial endocarditis seen at the Massachusetts General Hospital between July, 1958, and June, 1964, and included 26 cases which were diagnosed only at autopsy. A previous study of bacterial endocarditis at the hospital presented a review of cases seen from 1944 to June, 1958, and was used for comparison with the present series.

In the recent study the records of 100 patients were carefully reviewed. There were 56 males and 44 females, their ages ranging from 10 years to 89 years. The average yearly number of cases seen since 1944 was 15, and this varied little from year to year. During this period the number of hospital admissions remained about the same, which indicates that there was no significant change in the incidence of bacterial endocarditis during this 20 year period.

One of the important differences noted between the earlier study and the present review was the increase in the number of cases of acute endocarditis. The ratio of acute to subacute endocarditis increased progressively from 1:3.3 in the 1944-1958 series to 1:0.8 in the last two years of the present series. Acute endocarditis was characterized by hectic fever, leucocytosis, extreme toxicity and rapid deterioration of cardiac function—the virulence of the organism and the short duration of the clinical course also helped define this group. The patients with subacute endocarditis were not as violently ill and the clinical course was longer, there was less toxicity, the fever was not as high, and rapid cardiac deterioration did not occur.

In the present study of 100 patients the cardiac status before the onset of illness was normal in 19; congenital or rheumatic heart disease was present in 56; and there were 25 in whom a diagnosis of arteriosclerotic or calcific heart disease had been made. The incidence of rheumatic heart disease declined from 71 per cent in the 1944 to 1958 series to 46 per cent in the present series. In 16 of the 43 patients (37 per cent) with acute endocarditis there was no evidence of overt predisposing heart disease, in contrast to only three of 55 patients (5 per cent) with subacute infections whose hearts were clinically normal. The highest incidence of both acute and subacute endocarditis occured in the age group from 31 to 60 years, a total of 48 cases. There were 38 patients who were over 60 years of age, and a mere 12 under the age of 30.

A comparison of the etiologic organism in the 1944 to 1958 series and the present series indicated that alpha-hemolytic streptococci continue to be the most commonly isolated organism, in 66 per cent of the former and in 69 per cent of the latter series. The incidence of staphylococcus aureus infections increased from 14 to 23 per cent in the two series, but the frequency in acute endocarditis remained essentially the same and in both series was found in slightly over 50 per cent of the cases. According to the authors the prognosis was poor in these cases whether the staphylococcus was sensitive or resistant to penicillin. There was a modest increase in the number of Group A and Group D streptococci, but surprisingly gram-negative organisms were rarely recovered. In the two patients in

* Uwaydah, M. M., and Weinberg, A. N.: Bacterial endocarditis—a changing pattern. NEW ENG. J. MED., 273:1231-1235, (Dec. 2) 1965.

Editorials continued...

the recent study with endocarditis due to gram-negative bacilli their ages were 67 and 77 years.

There were various factors which contributed to the development of the disease in addition to a pre-existing cardiac condition. Foci of infection such as pyelonephritis, lung infections and furuncles were present in 65 per cent of the acute cases and in 24 per cent of the subacute cases. Five patients developed acute carditis following cardiac surgery. Dental problems were considered a factor in three of the acute and in 15 of the subacute infections. Diabetes, cirrhosis of the liver, cancer and other debilitating diseases were associated conditions in a number of patients and the infection followed general surgery in six cases.

In the 1944-1958 study 228 patients were involved. In 53 the endocarditis was classified as acute and 85 per cent of these patients died. The infection was subacute in 175 patients and death resulted in 32 per cent. In the present series of 100 patients, 43 were acute infections and 75 per cent were fatal; 55 were subacute and death resulted in 30 per cent. Thus during the 20 year period there has been a modest improvement in the survival rate in patients with acute endocarditis; however, the survival rate in those with subacute endocarditis has shown essentially no change.

The authors point out that in the group of 100 cases there were 15 with acute endocarditis and 11 with subacute endocarditis in whom the diagnosis was not made until post-mortem study. There was a definite relation between the age of the patient and the recognition of the disease in time to initiate therapy. In the younger age group (under 30) almost all cases were recognized but in those over the age of 30 recognition of endocarditis became progressively poorer, particularly in acute cases—in only nine of 17 in the 61 to 90 age group.

In the younger age group the recognition of the condition was associated with a good prognosis in both acute and subacute infections. In the 31 to 60 age group recognition resulted in a good prognosis in subacute infections but the survival rate in acute endocarditis was low, only 4 of 14 recognized cases survived. In patients over 60 years the mortality was high in both acute and subacute infections even when the diagnosis was made. The overall cure rate in recognized cases was 40 per cent for acute cases and 87 per cent for those with subacute infections.

One finding of unusual interest was the infrequency of gram-negative organisms found to be the etiologic agent in this series of cases, despite the increase in recent years in the number of cases of bacteremia and septicemia due to these organisms. The authors attribute this to the difference in the manner in which the host reacts to gram-negative and gram-positive organisms. It is postulated that in the case of gram-negative organisms bactericidal serum factors prevent the attachment and multiplication of organisms on the endocardium. In gram-positive organisms the host responds by cellular phagocytic mechanisms which by delayed cellular inflammatory reaction permit infection of the endocardial surface to occur.

It is pointed out that the poorer prognosis in elderly patients, particularly those with acute endocarditis is probably due to failure of early recognition and therefore a delay in treatment. The factor of increasing age, in association with medical and surgical illnesses, obscures the clinical picture of endocarditis.

The authors express the hope that through a better understanding of the changing patterns of bacterial endocarditis it may be recognized sufficiently early for appropriate therapy to be effective.

'PREVAILING FEE'— A SURRENDER

Following is an editorial on the "Prevailing Fee Concept" which appeared in a recent issue of the WISCONSIN MEDICAL JOURNAL. It was written by Carl A. Tiffany, consulting actuary for the Iowa Medical Society. Preface to the editorial is by Dr. D. N. Goldstein, editorial director of the WISCONSIN MEDICAL JOURNAL.

EDITOR'S NOTE: *The National Association of Blue Shield Plans announced its "Prevailing Fees Program" in October 1964, and since that time it has been implemented by a few local Blue Shield Plans. Several others are showing keen interest in this scheme, hailed by its backers as a "unique Blue Shield 'usual and customary' program," stimulated perhaps by favorable publicity in a national controlled circulation publication. Wisconsin's pioneers in medical prepayment without resort to fee schedules, exemplified by the enormously successful WPS "special service" program, immediately recognized the serious defects in the "new" approach that appeared eight years after its own. Consulting actuary Carl A. Tiffany, not only supreme in his field but a true friend of medicine, has redacted these deficiencies accurately and succinctly.*

—D.N.G.

The "Prevailing Fee" program's only appeal lies in the framework of Chamberlains philosophy of "peace in our time." The problems it will create are far greater than those it attempts to solve. It is in conflict with the right of every physician to receive *his* usual and customary fee, as it may obtain from time to time. It abridges the freedom of *all* physicians to participate.

The individual physician is simply too ineffectual as a bargaining agent to successfully alter or in-

fluence a decision of the administrative agency regarding fees. Physicians will have only two choices: try to practice outside the system or join with others to strengthen his bargaining power. With the continuing expansion of the public sector of medical practice participating physicians will soon feel the compulsion to organize into bargaining units of ever increasing size, culminating in national negotiations with Federal Government. The first sprouts are already appearing in the adoption of county-wide fee schedules.

Regardless of the sincere assurance of its proponents, many of whom will not be the actual administrators, the "prevailing fee" program will certainly erode into a fixed fee schedule, individual or otherwise, for the participating physician, and the unionization of medicine.

Physicians should not sell their birthright for this pottage.—CARL A. TIFFANY

TECHNICAL PROBLEMS IN CARDIOLOGY

In the use of the new technics and equipment in the management of disturbances of cardiac rhythm unexpected and challenging complications are inevitable. The ingenuity and courage of the modern pioneers in this work deserve commendation. The manner in which a team of physicians at Strong Memorial Hospital, Rochester, New York, met an unusual complication is of extraordinary interest and exemplifies the ingenuity of these clinicians.

At the time of the case report* from Strong Memorial Hospital permanent transvenous cardiac pacemakers had been inserted for the treatment of complete heart block 18 times in 16 patients since the technic was introduced in 1963. In one patient in this group irregular pacing developed with recurrent Stokes-Adams attacks which were attributed to perforation of the wall of the right ventricle by the tip of the catheter. The unusual aspect of the case was that when attempts to remove the catheter were made they were unsuccessful. Undismayed by this situation the cardiac team met the situation without resorting to a thoracotomy to remove the catheter.

The patient was a 73 year old woman with a long history of intermittent complete heart block and Stokes-Adams attacks. A transvenous pacemaker had been inserted into the tip of the patient's right ventricle via the right external jugular vein. Following this procedure irregular pacing was observed which necessitated repositioning of the catheter on two different occasions. Two weeks afterward the original catheter was removed and a new catheter was inserted and positioned in the apex of the right ventricle under fluoroscopic observation. Six days after insertion of the second catheter the patient developed sharp pain in the left chest which persisted for 48 hours and was accompanied by an apical pericardial friction rub and occasional disturbances of rhythm. X-rays of the chest demonstrated that the tip of the catheter was now located closer to the left cardiac border than it was on previous films. During the next two months the catheter pacing became more erratic and, at the end of this period, the patient had several Stokes-Adams attacks which were shown to be the result of cardiac asystole. It was observed that effective and consistent pacing would occur if the patient was turned on her left side. Attempts to remove the transvenous catheter were unsuccessful and upon tugging at the catheter it was observed that there was retraction of the ventricular apex under the fluoroscope, and transient runs of ventricular tachycardia occurred.

Confronted by this challenging situation the Rochester physicians inserted a new transvenous catheter through the left external jugular vein. The battery from the right side was then disconnected and transferred to the new catheter on the left. The catheter on the right was left in place. Subsequently, pacing was effective and consistent and there were no futher Stokes-Adams episodes.

According to the authors the sequence of events following the insertion of the second catheter on the right side are consistent with a sealed perforation of the ventricle. There was no change in the cardiac silhouette and there was no clinical evidence of pericardial tamponade. By the successful insertion of a catheter via the left external jugular vein, recourse to a thoracotomy was unnecessary.

* Moss, A. J., and Rivers, R.: Myocardial perforation by a permanent transvenous pacemaker. NEW ENG. J. MED., 275:265-266, (Aug. 4) 1966.

PREVENTION OF VENOUS THROMBOSIS

A recent contribution* to the subject of venous thrombosis by Richards from the Western Infirmary, Glasgow, deserves the serious attention of clinicians everywhere. It is the author's emphasis on prophylaxis of deep venous thrombosis that the practicing physician will find of unusual interest and practical value.

Though much has been written about the prevention of deep venous thrombosis the author emphasizes the most important rule to remember is that unless there are very important reasons why a patient should be confined to bed he should be urged to get up and walk about. Sitting in a chair

* Richards, R. L.: Diseases of heart and blood vessels: venous thrombosis. BRIT. MED. J., 2:217-219, (July 23) 1966.

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beside the bed is as bad, if not worse, than keeping him in bed. It is the loss of the pumping action by the leg muscles which results in a slowing of venous flow. If the patient must be restricted to his bed, regular exercises should be insisted upon and these should be done under proper supervision and direction. Exercises should involve all of the leg muscles and particularly the calf muscles. Breathing exercises should be encouraged for they result in an improved venous return to the heart. In patients in whom the possible complication of venous thrombosis is feared the use of elastic bandages or elastic hose is recommended because compression of the veins increases the linear velocity of flow.

In a patient for whom the simple preventive measures are not possible and if it is necessary that he spend more than three or four days in bed, the author urges that prophylactic anticoagulant therapy be considered. It should be kept in mind, however, that there are difficulties and risks involved in the use of anticoagulants, that it is not possible to treat all patients in whom there is a hazard of venous thrombosis, and a degree of selectivity must be exercised.

According to Richards clinical experience has demonstrated that prophylactic anticoagulant therapy has been of particular value in the following groups of patients:

1. Elderly patients with fractures of the hip, and probably in all other patients over 40 years of age with injuries necessitating confinement to bed more than two or three days. However, anticoagulants are contraindicated in patients with injuries to the head, thorax, spine or abdomen and in those with extensive burns.

2. Postoperatively in all patients over 40 years of age who have had a major gynecological operation, in all patients following a caesarian section, after an operation for malignancy of the genital tract, and postoperatively in those with a history of previous thrombosis.

3. General surgical patients over the age of 40 who have undergone a major operation, particularly if they are obese, have any evidence of preexisting vascular disease, or if the operation was for a malignant lesion.

4. Patients with congestive heart failure in whom venous thrombosis and embolism occur frequently.

The author acknowledges that despite the accumulated evidence supporting the prophylactic use of anticoagulants as recommended in his article there are few medical centers in England where this preventive approach to the problem of venous thrombosis is carried out. He urges that if anticoagulants are to be used they should be started promptly—on the first postoperative day in surgical patients and as soon as the injured person's condition has been evaluated. The treatment should be continued until the patient is fully ambulant.

Every physician can recall patients convalescing from an operation or injury who died unexpectedly from a pulmonary embolus just as they were about to be discharged from the hospital. Perhaps by making a greater effort to prevent the development of venous thrombosis the serious complication of embolism can be averted. It is only by keeping the possibility of thrombosis and embolism constantly in mind that meticulous effort will be made to prevent them.

Headquarters Building Dedicated October 9

The extended "Year of Dedication" program being conducted by the Iowa Medical Society between April 1966 and April 1967 reaches its high point this month with the formal dedication of the new Headquarters Building. This event is scheduled for Sunday, October 9, at 2 p.m.

The dedicatory address will be presented by Milford E. Rouse, M.D., of Dallas, Texas. Dr. Rouse is president-elect of the American Medical Association.

Other participants in the program will include Cecil W. Seibert, M.D., Chairman, IMS Board of Trustees, and Chairman of the Building Committee; Samuel P. Leinbach, M.D., President of the IMS; Frank G. Ober, M.D., Immediate Past-President, IMS, and Member, Board of Directors, Iowa Medical Foundation; Mrs. Ralph E. Hines, President, Woman's Auxiliary to the IMS; Frank K. Woolley, Field Representative, American Medical Association; Fernando Duran, R.N., President-Elect, Iowa Interprofessional Association; Paul Franzenburg, Treasurer, State of Iowa; Elmer Gering, Mayor, City of West Des Moines; Ronald Graham, B.D., Dean, Drake University Divinity School; and Donald L. Taylor, Executive Vice-President, Iowa Medical Society.

The new IMS building is serving as the focal point in a year-long program of events aimed at bringing to the attention of the Society's membership, as well as of the general public, the significant contributions made by the medical profession through its Iowa Medical Society.

Invitations to the formal dedication have been extended to officers of other state medical societies, to representatives of the various health related organizations, and to presidents of the county medical societies.

President's Page

We live in a critical time. The United States is faced with a great multiplicity of serious problems. These are present both at home and abroad. The role of government has been changed so that it now affects every aspect of American life and the life of every American. Many of the rights of the individual have been lost to collectivism. In spite of all that is happening the vast majority of Americans are basking in the smugness of apathy and indifference. Too little concern is given to what happens to the individual, his neighbors, or the future of our country.

As physicians, we have person-to-person contact with more people daily than does any other profession or group. Medicine is dedicated to the total well-being of Man. Thus, whenever possible, making the people we contact aware of the problems we face as a nation is worthy. The good physician is usually an active citizen. Both as a good citizen and as a physician he is dedicated to the well-being of others.

D. P. Leinbach

President

Iowa Chapter of the American Academy of General Practice

Don't Forget Boston in October

The 18th Annual Scientific Assembly of the American Academy of General Practice will be held October 8-14, 1966, in the War Memorial Auditorium in Boston, Massachusetts. The Scientific Assembly lecture program is October 10-13.

The morning of October 10 begins with clinical refresher courses at the Boston hospitals. This will give those attending an opportunity to visit these hospitals. As usual, the lecture program covers most of the major branches of general practice—Adolescent Medicine, OB, Pediatrics, Orthopedics and Geriatrics.

The Tuesday morning program begins with a general session entitled "Therapeutic Nuggets." A panel of five or six well known clinicians will present ideas and techniques which may be adapted to daily practice.

Anyone who has attended a previous annual Scientific Assembly is aware of the excellent content of the lectures, all of which are aimed at helping us with general practice.

As usual, there will be an entertainment program for the ladies. Opportunity will be available to visit scenes from our early American Heritage—the old North Church and Bunker Hill, and other areas that are well known from Revolutionary War days. A Capezzio Musical, a stage fashion show, a medley of models, singers and dancers with costumes and music from the top Broadway shows, are on the agenda for the ladies. This is a good opportunity to combine excellent scientific study with history and pleasure and a few days in New England.

Why not make a trip to Boston in October?

Have You Been a Preceptor?

If you have not been a preceptor, you have missed one of the opportunities available to help a student, the profession and yourself. As you know, the Iowa Medical Society and the University of Iowa College of Medicine have an excellent preceptorship program for junior medical students. A student must spend one month with a General Practitioner between the time he finished his Junior year and the time of his graduation. This exposure to general practice enables the medical student to become aware of the good medicine which is practiced in the state in places other than the large clinics and hospitals. It is also our chance to show him that general practice can be rewarding; that being a true family doctor can give him satisfaction not found in other phases of medicine, and it is our opportunity to recruit young blood for the general practice ranks.

These students also stimulate the preceptor by questions. We have the opportunity to explain why we do this and that, and it gives us the opportunity to think about procedures which have become routine. This gives us a chance to reminisce about our own medical school days and to compare the type of medical education of today with that available when we were in medical school. These young men and women are some of the finest young people in the state; it is good to have them in your home and in your office.

If you have not been a preceptor, think about it and apply either to the Iowa Medical Society or to the College of Medicine for a preceptee this year, and if you have had one, get another. You will feel you have done your bit to help train a young doctor and you will enjoy it.

Mercy Day in D.M. Set for October 15

The 1966 Mercy Hospital Medical Day will take place in Des Moines on Saturday, October 15, and will be presented in the form of a postgraduate course in gastroenterology.

In addition to presentations by approximately a dozen Polk County physicians, talks will be given by Irving B. Brick, M.D., professor of medicine at Georgetown University, Washington, D. C.; Walter H. Maloney, M.D., associate professor and director, Division of Otolaryngology, Western Reserve University, Cleveland, Ohio; and Alice E. Palmer, M.D., former chief of the Medical Education Branch of the Agency for International Development Mission to Viet Nam, Detroit, Michigan.

Dr. Palmer will describe her recent medical experiences in Viet Nam at the evening session, which is co-sponsored by the Polk County Medical Society.

THE DOCTOR'S BUSINESS

Dollar Averaging of Costs

HOWARD D. BAKER
Waterloo

The severe market decline of the past several weeks highlights the significance of timing purchases to attain maximum success in any investment program. *When* to buy is equally important as *what* to buy.

Large market declines bring about emotional reactions with a natural tendency to reduce or postpone commitments. The long-range investor is aware that fluctuations in market prices are inevitable and actually provide opportunities.

There is no assurance that the current market decline has run its course, nor that stock prices will soon return to their earlier high level. However, stock valuations are now conservative in terms of earnings and general conditions indicate that this is an excellent time to initiate a monthly investment program—or retain the program you have at its present level, or higher.

What is *Dollar Averaging*? By setting up a plan to invest a given amount at specified intervals regardless of price, you can insure yourself, to a degree, against the hazards of timing of stock purchases. This plan can be used to buy either individual stocks or the more popular investment fund shares. Generally speaking, the longer your purchases run, the more likely dollar averaging is to work to your advantage.

An example of the results of dollar averaging is shown in the following table. For the sake of simplicity, we are assuming price changes only annually.

Period	Price Per Share	You Invest	No. Shares
1 Year	$12	$ 1,200	100
2 Years	10	1,200	120
3 Years	8	1,200	150
4 Years	6	1,200	200
5 Years	4	1,200	300
6 Years	6	1,200	200
7 Years	8	1,200	150
8 Years	8	1,200	150
9 Years	10	1,200	120
10 Years	12	1,200	100
Total	$84	$12,000	1,590

What has happened? The *average price* was $8.40 ($84 divided by 10 years), your total 10-year investment was $12,000 and you accumulated 1,590 shares which means your *average cost* was only $7.54 per share. Since the price at the end of the 10 years is again $12 per share, your shares are worth $19,080, an increase of $7,080 over your $12,000 cost.

This represents a growth of 59 per cent *even though the price was never higher than at the start.* This clearly demonstrates that in addition to gains in a rising market, substantial gains can be had in a falling market through dollar averaging—providing the market comes back to near its original level.

For the past 150 years, stock prices have gone down and then they have come up again. As long as they do this during your lifetime, this method is certain to produce profits. Whether the market goes up or down, dollar averaging is always an excellent program for the new investor if carried on for a considerable period of time—at least seven to ten years.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

When uncontrolled diarrhea brings a call for help

When the diarrhea sufferer has run the gamut f
home remedies without success, pleasant-tast
CREMOMYCIN can answer the call for help. It can
counted on to consolidate fluid stools, soothe int
tinal inflammation, inhibit enteric pathogens, a
detoxify putrefactive materials — usually within
few hours.

CREMOMYCIN combines the bacteriostatic ager
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INDICATIONS: Diarrhea.

CONTRAINDICATIONS: Do not use in intestinal obstruction,
tensive ulceration of bowel, or diverticulosis; in hypersensiti
to sulfonamides or neomycin; in pregnancy at term, in premat
infants, or during first week of life in the newborn.

WARNINGS: Use only after critical appraisal in patients w
hepatic or renal damage, urinary obstruction, or blood dysc
sias. Fatal hypersensitivity reactions and blood dyscrasias
ported with use of sulfonamides. Consider periodic blood cou
hepatic and renal function tests during intermittent or chro
use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if th
is history of significant allergies and/or asthma. Continued u
requires supplementary vitamins B_1 and K. *Neomycin:* Watch

your ℞ for Cremomycin can provide relief

are-like neuromuscular block during anesthesia if neomycin used preoperatively in large doses when renal function is or; watch for overgrowth of nonsusceptible organisms. Con- er possibility of ototoxicity and nephrotoxicity with prolonged h dosage.

DE EFFECTS: As with all sulfonamides: Headache, malaise, an- xia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, uropathy, drug fever, rash, conjunctival and scleral injection, echiae, purpura, hematuria, and crystalluria have been noted. duced fecal output of thiamine and decreased synthesis of min K have been reported. *Neomycin:* Nausea, loose stools.

ore prescribing or administering, read package circular with duct or available on request.

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Cremomycin®

NTIDIARRHEAL

mposition: Each 30 cc. contains neomycin sulfate 300 mg. uivalent to 210 mg. of neomycin base), succinylsulfathiazole Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

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"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Pre-Exposure Immunization Of Man Against Rabies

Pre-exposure immunization against rabies is of interest to persons whose work or other activity is likely to result in a high risk of exposure to the disease. Veterinarians, dog handlers, field naturalists, laboratory workers, spelunkers and others may be included in the high risk groups.

The development in recent years of duck embryo killed rabies virus vaccine (Lilly), which is reported to be almost devoid of encephalitogenic properties, makes possible the consideration of pre-exposure immunization. This is the same vaccine used for the 14-21 dose regimen of post-exposure treatment. Caution should be used in administering the vaccine to persons with a history of allergy, especially when the allergy is to chicken or duck eggs or proteins.

The following regimen for pre-exposure immunization is suggested by the United States Public Health Service Communicable Disease Center and is in general accord with the World Health Organization report.

A. Material—Duck embryo killed rabies vaccine (Lilly)

B. Administration (The basic immunizing series consists of 3 injections)

1. Dosage—1 ml. per injection
2. Subcutaneous in lateral aspect of upper arm
3. Two doses with a 30 day interval
4. Booster dose 6 months after second injection

C. Antibody determination. A 5 ml. blood specimen for neutralizing antibody determination should be taken 30 days after the booster dose. Send the specimen, with the dates of vaccine administration, to the Virology Division, State Hygienic Laboratory, University of Iowa, Iowa City.

D. A person who does not develop a positive antibody titer may receive additional booster doses until antibody is detectable. (Approximately 90 per cent of the persons who receive the primary series of two doses plus the booster after six months do develop detectable antibody.)

E. Subsequent booster doses. A booster dose every year or every two years, depending upon the risk of exposure, is suggested for persons who have received the pre-exposure series and have developed detectable antibody.

F. Subsequent Exposure to Rabies. Treatment for a person who has received the pre-exposure immunization series, and developed detectable antibody, in general would be based on the degree of exposure and the time interval between immunization and exposure. Each case must be considered individually. In a mild exposure, only one or two doses may be indicated whereas a severe exposure might require the full 14 dose post-exposure treatment. (Severe exposure, according to the World Health Organization Expert Committee on Rabies, includes multiple bites or bites on the face, head, neck or finger.)

Typhoid Vaccine*

(Recommendations of the Public Health Service Advisory Committee on Immunization Practices)

The incidence of typhoid fever in the United States has declined steadily for many years. At the present time, less than 500 cases are reported annually, and a continuing downward trend can be expected. Cases are sporadic and are primarily related to contact with carriers rather than to common source exposure. Recognizing this epidemiologic pattern of typhoid fever, re-definition of the role and use of typhoid vaccine is indicated.

CURRENT STATUS OF TYPHOID VACCINE

Although typhoid vaccines have been employed for many decades, definitive evidence of their effectiveness has been accumulated only recently from well controlled field investigations. Several different preparations of typhoid vaccine have been shown to afford protection in approximately 70 to 90 per cent of individuals immunized, depending in part on the degree of their subsequent exposure.[1]

RECOMMENDATIONS FOR VACCINE USE

Routine typhoid immunization is *not* recommended in the United States. Selective immunization is, however, indicated in the following situations:

1. Intimate exposure to a known typhoid carrier as would occur with continued household contact.

* Reproduced from the Communicable Disease Center MORBIDITY AND MORTALITY WEEKLY REPORT, July 23, 1966.

2. Community or institutional outbreaks of typhoid fever.

3. Foreign travel to areas where typhoid fever is endemic.

Although typhoid vaccine has been suggested for individuals attending summer camps and those in areas where flooding has occurred, there are no data to support the continuation of these practices.

DOSAGE AND SCHEDULE

On the basis of the field trials referred to above, the following dosages are recommended, employing the vaccines available in the U.S.A.:

Primary Immunization

Adults and children over 10 years

0.5 ml. subcutaneously on two occasions, separated by four or more weeks

Children 6 months to 10 years*

0.25 ml. subcutaneously on two occasions, separated by four or more weeks

In instances where there is insufficient time for the two doses to be administered at the time intervals specified, three doses of the same volume listed above may be given at weekly intervals.

Booster Immunization

Under conditions of continued or repeated exposure a booster dose should be given at least every three years. Even if an interval greater than three years has elapsed since the prior immunization, a single booster injection should be sufficient.

The following alternative routes and dosages of booster immunization can be expected to give comparable antibody responses; generally less reaction follows the intradermal route.

Adults and children over 10 years

0.5 ml. subcutaneously or 0.1 ml. intradermally

Children 6 months to 10 years*

0.25 ml. subcutaneously or 0.1 ml. intradermally

PARATYPHOID A AND B VACCINES

The effectiveness of paratyphoid A vaccine has never been established, and recent field trials have shown that available paratyphoid B vaccines were ineffective. In view of these data and recognizing that the paratyphoid A and B antigens when combined with typhoid vaccine may increase the occurrence of vaccine reactions, use of paratyphoid A and B vaccines is *not* recommended.

* * *

The Iowa State Department of Health has, for the last 15 years, been instructing areas in the state that have suffered from flood waters that typhoid vaccine is not needed as a general control procedure.

We want, also, to call attention to the change in the basic immunization schedule. What formerly was considered an alternate schedule (two injections separated by four or more weeks) has now become the preferred schedule of immunization.

* Since febrile reaction in this age group is common following typhoid vaccination, an antipyretic may be indicated.

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1. Cvjetanovic, B. and Uemura, K.: The present status of field and laboratory studies of typhoid and paratyphoid vaccine. Bull. WHO 32:29-36, 1965.

Morbidity Report For Month of August 1966

Diseases	1966 Aug.	1966 July	1965 Aug.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	107	160	83	Jefferson, Johnson
Typhoid fever	0	0	1	
Smallpox	0	0	0	
Measles	31	157	32	Buena Vista, Scott
Whooping cough	3	7	1	Cedar, Des Moines, Lee
Brucellosis	7	3	10	Linn
Chickenpox	19	35	10	Franklin, Scott
Meningococcal meningitis	1	3	0	Black Hawk
Mumps	31	77	19	Dubuque, Polk, Scott, Story
Poliomyelitis	0	0	0	
Infectious hepatitis	47	39	40	Des Moines, Dubuque
Rabies in animals	11	18	14	Buchanan, Buena Vista, Greene, Webster
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	11	26	20	For the state
Syphilis	84	98	50	For the state
Gonorrhea	248	284	184	For the state
Histoplasmosis	0	1	2	
Food intoxication	0	0	1	
Meningitis (type unspec.)	3	2	2	Cedar, Linn, Polk
Diphtheria carrier	0	0	0	
Asceptic meningitis	0	3	5	
Salmonellosis	12	6	11	Johnson, Polk
Tetanus	1	0	2	Kossuth
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	0	
H. influenzal meningitis	2	1	2	Jasper, Polk
Amebiasis	0	0	1	
Shigellosis	2	3	3	Johnson, Polk
Influenza	0	0	0	

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

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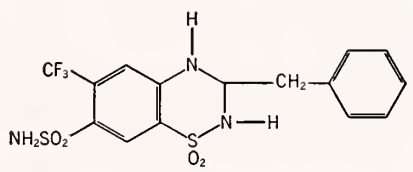

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For peptic ulcer, gastric hyperacidity, gastritis

Each WinGel tablet or teaspoon (5 ml.) contains 410 mg. of combined, highly reactive, short polymer, aluminum and magnesium hydroxides **stabilized with hexitol.**

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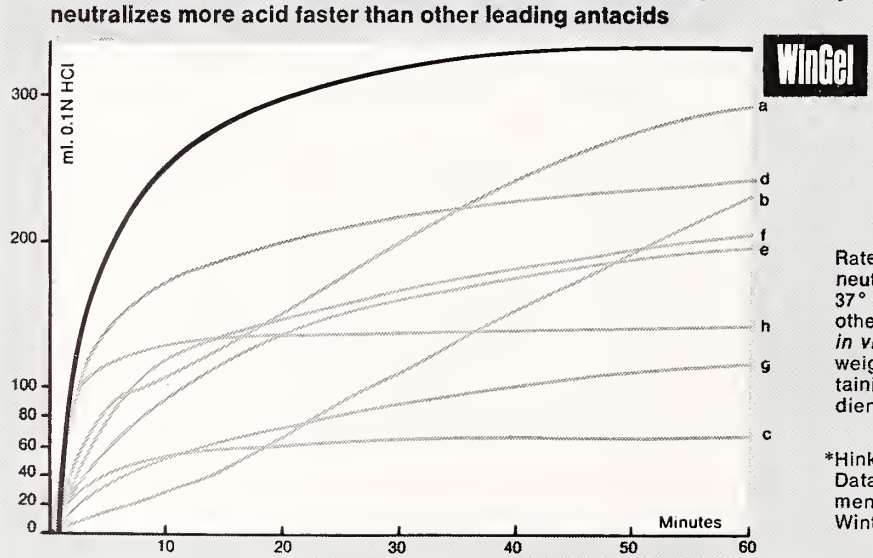
Gastric or duodenal ulcer, acute or chronic gastritis, gastric hyperacidity...wherever there is "acid overflow" new WinGel can provide faster, longer, more complete neutralization.

In recent laboratory comparisons* with eight other leading antacids, new WinGel tablets not only neutralized more hydrochloric acid per active-ingredient weight, but neutralized it faster and longer than all other antacids tested.

Pleasant pink in color, WinGel is delicately mint flavored with a smooth-as-cream texture—qualities sure to please the patient on long-term therapy. New WinGel is also specially formulated to avoid constipation or diarrhea.

New WinGel neutralizes 300 times its active-ingredient weight in 0.1N hydrochloric acid—neutralizes more acid faster than other leading antacids



Rate of 0.1N hydrochloric acid neutralization at pH 3.5 and 37° with WinGel and eight other leading antacid tablets—*in vitro*. Samples equaled the weight of tablet material containing 1.0 Gm. active ingredients.*

*Hinkel, E. T., Jr. (New York): Data in the files of the Department of Medical Research, Winthrop Laboratories.

Dosage: Peptic ulcer or gastritis—from 2 to 4 teaspoons of WinGel liquid or 2 to 4 tablets chewed or allowed to dissolve in the mouth every two to four hours. **Gastric hyperacidity**—2 tablets or teaspoons about ½ to one hour after meals as needed; children from 7 to 14 years of age, 1 or 2 tablets or 1 or 2 teaspoons of liquid as needed.

How Supplied: Liquid in bottles of 8 fl. oz. and 1 pint. **Tablets** in cellophane strips, boxes of 50 and 100. (One teaspoon of WinGel liquid is equivalent to one WinGel tablet in acid-combining capacity.) WinGel, trademark reg. U.S. Pat. Off.

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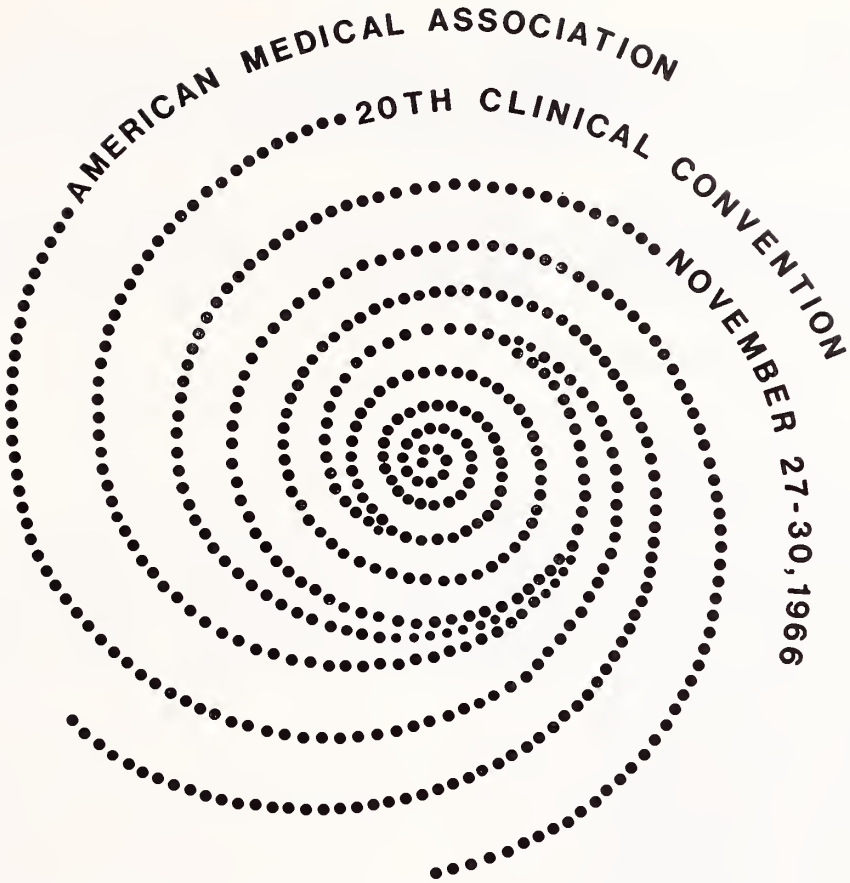

AMA '66
LAS VEGAS

Convention site "extraordinaire" that's Las Vegas. America's entertainment capital becomes the classroom for America's practicing physicians—offering you a comprehensive, compact, postgraduate course in recent developments in medical science. A magnificent Convention Center, fine hotels and motels, excellent restaurants plus star studded entertainment await you and your family.

The AMA's first clinical convention in Las Vegas offers a top notch scientific postgraduate program.

Scientific sessions will be held on the following topics: Scintillation Scanning • Radiation and Cancer • Clinical Pulmonary Physiology • Gastroenterology • Futuristic Diagnostic and Therapeutic Tools • Neck Pain • Antibiotics • Urology • Aerospace Medicine • Unconsciousness • Dermatology • Juvenile Diabetes • Endocrine and Metabolic Diseases • Pediatrics • Surgery • Hematology • Psychiatry • Otolaryngology.

Three Postgraduate Courses will be presented: Obstetrics and Gynecology • Fluid and Electrolyte Balance • Cardiovascular Disease. Each Course will consist of three half-day sessions, and there will be a registration fee of $10.00 for each course, payable with your advance registration.

Four Breakfast Round Table Conferences will be held on the following topics: The Management of Metabolic Bone Disease • Indication for Cardioversion • The Problems and Potential of L.S.D. • An Agonizing Reappraisal of Cancer Chemotherapy • **Closed Circuit Television • Medical Motion Picture Programs • Over 275 Scientific and Industrial Exhibits.**

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA October 24.

Iowa Association of Medical Assistants

Have You Thought About It?

Every day—every year, the many branches of industry offer new and improved products to every business and profession, including the medical profession. These products are styled for today—many for your use as a medical assistant—to save time, to improve the office efficiency, and to provide the best for the *patient-public.*

With this great contribution to the profession a situation arises: *HOW DOES THE MEDICAL ASSISTANT LEARN to handle, operate, or dispense this wealth of useful material?*

While training facilities for the actively employed medical assistant may be inadequate in some areas, this does not mean that she cannot plan an individual study program, selecting subjects, articles and books* to meet the need.

Groups of medical assistants throughout the country are doing "something" about the need for more training for the employed M.A. The goal of CERTIFICATION takes time and effort, and in many areas women are doing just what has been suggested, studying, individually and in groups. The tests are challenging, at first one may not be able to pass, but this should serve to increase the desire to reach the goal.

In addition to individual study programs, other methods of continued education exist and include: 1. Local study clubs, 2. State In-Service Training, and 3. District Seminars.

At least one or more of the above programs are offered each year for *any* medical assistant by the Iowa Association of Medical Assistants. Also, the American Association of Medical Assistants, Inc., will offer a testing opportunity in an area if the number of requests are sufficient.

Avail yourself of recognized educational programs; seek formal academic training in courses in anatomy, psychology, sterile techniques, the management and clerical duties in a medical office. The demands of tomorrow in the medical office are far beyond the scope of our imagination. Preparedness will pay dividends for you and your employer.

*SUGGESTED BIBLIOGRAPHY

Medical Terminology: UNDERSTANDING MEDICAL TERMINOLOGY by Sister Agnes Clare

Anatomy and Physiology: DYNAMIC ANATOMY AND PHYSIOLOGY by Langley, Cheraskin and Sleeper

Medical Ethics and Etiquette: PRINCIPLES OF MEDICAL ETHICS, American Medical Association or PUBLIC RELATIONS IN MEDICAL PRACTICE by James Bryan

Medical Law and Economics: MEDICOLEGAL FORMS WITH LEGAL ANALYSIS, American Medical Association; PRINCIPLE OF ECONOMICS by Gemmell and Balsley

Office Skills and Procedures—Communications Exm. Room Techniques: THE OFFICE ASSISTANT IN MEDICAL PRACTICE by Frederick and Towner: MEDICAL SECRETARY'S AND ASSISTANT'S HANDBOOK by Besse May Miller

Personal Adjustment and Human Relations: THE TECHNIQUE OF HANDLING PEOPLE, by Laird and Laird

Where you may secure information about the educational programs:

American Association of Medical Assistants
510 North Dearborn
Chicago, Illinois

—MARIAN LITTLE

Patient Booklets Available

REDUCE YOUR RISK OF HEART ATTACK is the title of a new American Heart Association booklet which is available to physicians for distribution to patients. The booklet summarizes in lay terms what is known of the etiology of the major risk factors in this area and outlines ways to reduce them. It advises regular checkups and suggests diet and living habit changes intended to benefit the whole family.

In addition, the Association has expanded an older booklet, FACTS ABOUT HEART AND BLOOD VESSEL DISEASES to include a new section on reducing the risk of heart attack. This publication also presents information on 19 cardiovascular disorders in concise form, and includes a brief discussion of the physiology of the circulatory system.

Copies of both booklets are available to physicians without charge from the Iowa Heart Association.

If you can't alarm her into wearing elastic stockings...

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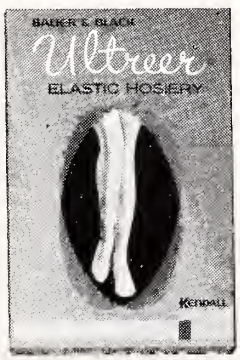
You see, a woman simply has no defense against Ultreer Elastic Stockings. They look like lovely support stockings. They feel like lovely support stockings. They're that sheer, and shapely and comfortable.

But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. Each pair provides the therapy you prescribe. And at such a low price, a woman can afford two pairs of Ultreer as easily as she can afford one pair of ordinary elastic hosiery.

Ultreer. What a stocking.



KENDALL
BAUER & BLACK SUPPORTS DIVISION

Woman's Auxiliary News

From the President

October is probably one of the busiest months of the year as we swing into the activities we elect to work into our bulging schedules. Be sure to plan some time for your County Medical Auxiliary.

We will have another first in the Woman's Auxiliary to the Iowa Medical Society this month. Your president-elect, Mrs. Max Olsen, is the chairman of a Workshop for County Officers and Committee Chairmen to be held on October 25 at the new Society Headquarters Building, 1001 Grand Avenue, West Des Moines 50265. The morning portion of the workshop will consist of orientation briefings by the state officers and committee chairmen followed by a question and answer period. The afternoon program will feature a demonstration of one of the national package programs by Mrs. J. L. Kehoe, of Davenport. We hope this will encourage each of you attending the workshop to look into the package programs, then discuss with your County Society the one most needed in your community. Your presentation of one of these programs in your area, with wide distribution of information, will do much to solve a health problem. Just as the enthusiasm of the national officers and committee chairmen rubs off on the state officers and chairmen so, too, we hope this workshop will provide sparkle and substance for the county officers and chairmen, and somehow touch each of our 1,300 plus members during the year.

Are each of you doing something in the realm of politics? Are you seeking out information about the men running for office: Their backgrounds, their philosophies, their platforms, etc. If they are incumbents, know their voting records and support those whose records agree with your thinking. Work to win others to support your candidates. *POLITICS IS EVERYBODY'S BUSINESS!!!*

Mrs. Ralph E. Hines, *President*

National Convention Highlights

Fast Growing Government

One speaker during the Chicago meeting was Mr. Richard C. Cornuelle, Executive Vice President of the National Association of Manufacturers and author of the book RECLAIMING THE AMERICAN DREAM.

Mr. Cornuelle said the general public's alarm over our fast growing government has tripled in the last four years, according to a recent Gallup Poll. He alluded to De Toqueville, well known nineteenth century French statesman, who made a perceptive analysis of the various forces at work in America. Highly unusual here, De Toqueville felt, was the development of a mighty third force, that of the independent institution of the non-profit volunteer type. This force is one in addition to the more usual ones of government and commerce. Oddly perhaps, Galbraith in his book THE AFFLUENT SOCIETY never refers to this particular element in American Life.

Mr. Cornuelle feels there must be a renaissance of these institutions or the American dream will fail. He posed the question: Is it a fact or an accident that independent institutions take so little responsibility in America today? He cited several examples of how much more efficiently and economically such things as student loan funds and slum renewal projects function when channeled through independent organizations. A striking illustration of this was a reference to several groups of Harlem drop-outs regarded as potential delinquents. They had achieved to about a fourth grade level in their previous exposure to school. Under an independent program they were moved ahead four years in seven weeks' time. This process multiplied many times could make quite a dent in hard core unemployment. This was *not* one of the government's anti-poverty program.

Another example of effectiveness in the independent sector was a slum renewal project which borrowed heavily on pre-cut housing techniques. Dwellers in the area were organized in teams of 12, and each team built 12 houses, and from this a proud, new community emerged. Modern methodology can and should be adopted to develop more efficiency.

Mr. Cornuelle concluded his talk by pointing out that next year we will move into the last third of the twentieth century. The first third was one of tremendous growth of production in the commercial sector. The second third is one in which we have experimented freely and extravagantly with government action on problems confronting us. The last third may, hopefully, our speaker felt, see a restoration of the independent sector approach to the solution of some of the major challenges of our time.

Mrs. S. P. Leinbach

It's a Man's World

Featured speaker at the convention meeting honoring past presidents of the national Auxiliary was Dr. James Z. Appel, himself immediate past president of the AMA. Dr. Appel's talk, entitled "Is It a Man's World?" was carefully keyed to the 300 or more women present. It flattered and emphasized their position in a man's world. He referred to them as companions and sources of true inspiration.

Dr. Appel gave a brief résumé of the status of women through the ages. He examined the view of womanhood held by the Chinese and the Hindus. He said that women have slowly achieved recognition and now have almost complete equality with men just as Plato asserted in his REPUBLIC thousands of years ago.

Dr. Appel contrasted numerous everyday occurrences in our modern life with those of women in other parts of the world. But the spotlight today, he said, is on women of the United States: What high standards of living we have achieved, liberated from the drudgery of work through the aid of a giant in the refrigerator, a white tornado in the washing machine, etc.; these so that the lady of the house can be freed to enjoy the more pleasant aspects of life, to make hers a better community, different from the kind women live in other parts of the world, such as Russia, where they still perform heavy tasks, or in South Asia, where the position of Hindu, Muslim and Chinese women generally is not high.

But how women in general, through their participation and cooperation, have helped men to make this a better world, a healthier world, is, in my mind, what Dr. Appel tried to stress, and in so doing, he was most successful for he not only bolstered our feminine egos but ratified that, indeed, this is a man's world.

MRS. ALFREDO SOCARRAS

WA-SAMA

The following is a thank you letter to the Woman's Auxiliary to the Iowa Medical Society from Mrs. Alan (Emily) Munson. It expresses gratitude for the help provided in sending her to the National WA-SAMA Convention in Los Angeles. The letter was received by Mrs. J. F. Veverka, of Prairie City, editor of the WOMAN'S AUXILIARY NEWS.

Dear Mrs. Veverka,

I wanted to thank you for helping to send me to the National WA-SAMA Convention in Los Angeles during May. I can't express to you how much I enjoyed the Convention, and the ideas presented during the meetings were really terrific. It was gratifying to meet many new persons, many of whom I'm sure will be friends for years.

Perhaps you would enjoy a little résumé of the convention and its proceedings. We flew by jet from Des Moines (my husband Alan was on vacation, and he was able to go there for internship interviews). We arrived in Los Angeles, May 11. Registration was that afternoon with a SAMA Hospitality House being held that evening at the Statler-Hilton Hotel. Most of the next morning was filled with chapter reports; each of the delegates being asked to give a two-minute résumé of her chapter's activities and projects during the year. This was extremely informative and proved an excellent means for exchanging pertinent ideas.

Dr. Donald D. Dedmon, of Smith Kline and French, spoke on "Carrying Coals to Newcastle—Teaching Women How to Speak," and I believe all who attended his lecture picked up some valuable pointers. Wyeth Laboratories hosted the luncheon on May 12 and an interesting program entitled "Doctor and the Law" was presented. Round table discussions were held throughout the convention, and they proved to be one of the best ways of obtaining information from the other chapters in attendance.

One of the most interesting programs at the convention was presented at the Minnesota Mutual luncheon. It was called "Portraits of American Women." A Protestant wife, a Negro wife, a Jewish wife, and a Catholic wife gave their impressions of how being what they are affected their lives. There was excellent audience participation in this program.

Anita Jochims, our local WA-SAMA immediate past president, was presented with the Chapter-of-the-Year Award for Region V. This was a nice honor for Anita to receive in behalf of the chapter, for she worked hard and diligently during her year of presidency.

Thank you again so very much for the opportunity to attend this national convention. I enjoyed it so much and appreciate all that you have done for our chapter.

Hoping to hear from you during the year.

Sincerely,

MRS. ALAN (EMILY) MUNSON

News From Around The Hawkeye State

Polk County

The Licensed Practical Nurses Alumni Association and the Auxiliary to the Polk County Medical Society entertained at a reception honoring August 1966 graduates of the Des Moines School of Practical Nursing and their guests.

Mrs. W. B. Chase, Jr., was chairman of the reception. She was assisted by Mesdames H. C. Merillat, Al Smith, Floyd Burgeson, D. C. Wirtz, Leo Pearlman, and Olin Elliott, president of the Polk County Medical Auxiliary.

Should The Doctor's Wife Join?

She's asked to join the Medical Auxiliary!
That's impossible, for you see
She belongs to so many other things.
She's as busy as can be!
First, there's Music Study Club
She usually attends and dotes,
She may have no business there
For you see—she sings no notes.
Then to the Literary Club she goes
Tho' most programs are quite dull and dry.
And to understand long papers
She, I'm afraid, doesn't even try.
Of course, there's P.T.A. at school
(She really owes her children this)
So Johnny's room can get the Banner
She always goes—she mustn't miss!
Every Tuesday third there's D.A.R.
(It's so much fun to learn one's Tree)
Ancestors are so nice to know,
But now she wonders: Are they proud of me?
You say the Auxiliary has a fund
And has nurses that are through?
She'll be glad to mention Susan's name?
She'll be happy, if you do.
TODAY'S HEALTH? Now what is that?
She's sure a copy never seen
You say the doctors publish it?
What ever do you mean?
The AMA-ERF? Sounds like a government group!
Just what is it they do?
So it is to train new Docs?
And the Auxiliary helps that way too?
It sounds so nice, but I can't join—
The town is full of so many clubs.
We go to luncheons every week
We're all getting fat as tubs.
Mental Health? I've heard of that.
Civil Defense? That's a bore!
Auxiliary covers lots of ground,
Don't tell me any more.
Oh, I like to discuss our Medical problems
But, of course, I never dare!
But, there's truth in what you say—
At Auxiliary meetings, do it there!

M. N. REIFF

(Taken from THE HOOSIER DOCTOR'S WIFE, *March 66)*

Marshalltown's New Nurses Dormitory

The Evangelical Hospital School of Nursing in Marshalltown is now in the process of completing a new $380,000 dormitory for student nurses. It is expected to be ready for occupancy this fall. The building will have 36 rooms to accommodate 72 student nurses. Site of the new building location is Fourth Avenue at State Street in Marshalltown.

The hospital has graduated 761 Professional Nurses during the past 51 years. Over 70 per cent of the Registered Nurses employed at the Evangelical Hospital are Evangelical graduates.

Tell Others About Your County

The AUXILIARY NEWS, *our* paper, needs *our* help. Without the contributions of each county we could not have a State Auxiliary. This is also true of *our* state paper. Please help us do a good job for you and give your county the recognition it deserves. Tell everyone about your county and its accomplishments. Send all your news to us and let us continue to print *our* paper. Thanks so much.

MRS. ROBERT (JUSTINE) FOLEY
Editor
MRS. WALTER (MARY) EIDBO
Co-Editor

AMA-ERF Fund Raising Projects

Note Paper

Playing Cards

Christmas Cards

Mrs. D. F. Crowley, Chairman
5225 Woodland Avenue, Des Moines 50312

or

Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310
President-Elect—Mrs. M. E. Olsen, Minden 51553
Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501
Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312
Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265
Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

Coming Meetings

(Continued from page 1000)

Nov. 11	**9th Annual Symposium on Diabetes, Diabetes Association of Greater Chicago,** Michael Reese Hospital, Chicago.
Nov. 11	**Postgraduate Course on Coronary Arteriography,** Hahnemann Medical College and Hospital, Philadelphia.
Nov. 11-12	**Association of Clinical Scientists Seminar, "The Laboratory Diagnosis of Liver Diseases,"** International Inn and The Washington Hospital Center, Washington, D. C.
Nov. 14-17	**19th Annual Conference on Engineering in Medicine and Biology,** Sheraton-Palace Hotel, San Francisco.
Nov. 14-18	**Postgraduate Course on Newer Aspects of Experimental and Clinical Allergy, American College of Physicians,** Sheraton-Boston Hotel, Boston.
Nov. 14-18	**11th Annual Course in Occupational Health for Nurses, New York University Medical Center and American Association of Industrial Nurses,** New York.
Nov. 15	**14th Annual Sigmund Pollitzer Lecture, "Virus, Cell and Host Relationships in Varicella-Zoster Infections,"** New York University Medical Center, New York City.
Nov. 17-19	**Florida Pediatric Society,** Beach Club Hotel, Ft. Lauderdale.
Nov. 18-19	**American College of Physicians Michigan Regional Meeting,** Detroit.
Nov. 19	**Nebraska Mid-State Medical Conference, "Female Hormone Therapy—Recent Advances," Buffalo County Medical Society,** Holiday Inn, Kearney, Nebraska.
Nov. 19-20	**American College of Physicians New Jersey Regional Meeting,** Asbury Park.
Nov. 23	**Symposium on Management of the Chronic Disease Patient, "Leukemia,"** sponsored by **United States Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.
Nov. 27-30	**8th National Conference on the Medical Aspects of Sports,** sponsored by the **American Medical Association,** Caesar's Palace, Las Vegas.
Nov. 28-29	**3rd Research Conference of the Parkinson's Disease Information and Research Center,** Alumni Auditorium, College of Physicians and Surgeons, New York.
Nov. 28-30	**Nevada State Medical Association,** The Dunes, Las Vegas.
Nov. 28-Dec. 1	**3rd Annual Postgraduate Course on Pulmonary Function in Health and Disease, American Thoracic Society,** Auditorium, Tulane University School of Medicine, New Orleans.
Nov. 28-Dec. 2	**Progress in Gastroenterology—1966, American College of Physicians,** The Annenbert School of Communications, Philadelphia.
Nov. 29-Dec. 1	**American Academy for Cerebral Palsy,** Broadwater Beach Hotel, Biloxi-Gulfport, Mississippi.

ABROAD

Oct. 1-4	**15th Congress International College of Surgeons,** Mexico City.
Oct. 3-6	**63rd French Congress of Otorhinolarynology,** Paris.
Oct. 3-7	**Symposium on Solid-State and Chemical Radiation Dosimetry in Medicine and Biology, International Atomic Energy Agency,** Vienna.
Oct. 3-8	**6th International Congress of Clinical Pathology,** Rome.
Oct. 6-8	**Annual Meeting, European Academy of Allergology,** Brussels.
Oct. 6-9	**14th French National Congress on Preventive and Social Medicine,** Strasbourg, France.
Oct. 7-9	**International Symposium on Coronary Circulation and Energetics of the Myocardium,** Institute of Experimental Cardiology, Milan.
Oct. 10-15	**8th Latin-American Congress of Anesthesiologists,** Caracas, Venezuela.
Oct. 11-13	**International Symposium on Physical Activity and Cardiovascular Health, Ontario Medical Association and Ontario Heart Foundation,** Toronto.
Oct. 13-19	**6th Congress International Academy of Pathology,** Kyoto, Japan.
Oct. 14-18	**Interamerican Association of Gastroenterology,** Madrid.
Oct. 17-19	**Annual Meeting German Society for Hematology,** Berlin.
Oct. 17-22	**20th Austrian Physicians Congress,** Vienna.
Oct. 23-29	**9th International Cancer Congress,** Tokyo.
Oct. 24-26	**16th Annual Scientific Meeting, Otolaryngological Society of Australia,** Sydney.
Oct. 24-28	**Australian College of General Practitioners,** Adelaide, South Australia.
Oct. 24-28	**15th Pan-American Congress on Tuberculosis and Respiratory Diseases,** Buenos Aires.
Oct. 25-29	**53rd Annual Meeting, German Orthopedic Society,** Hamburg.
Oct. 25-29	**2nd Latin-American Congress of Allergology,** Quito, Ecuador.
Oct. 28-29	**5th French National Congress on Sports Medicine,** Tours, France.
Oct. 29-Nov. 3	**Congress on Pediatrics, 8th Pan-American, 1st Latin-American, and 11th Mexican,** Mexico City.
Oct. 29-Nov. 4	**2nd Conjoint Meeting, Australian-New Zealand Ophthalmological Societies,** Rotorua, New Zealand.
Oct. 30-Nov. 5	**5th World Congress of Cardiology,** New Delhi.
Nov. 1-5	**American Fracture Association,** Caracas, Venezuela.
Nov. 13-16	**6th Latin-American Congress of Otorhinolaryngology,** Mexico City.
Nov. 13-19	**5th Latin-American Congress of Gynecology and Obstetrics,** Santiago, Chile.
Nov. 17-19	**6th Annual Far East Session, American College of Physicians,** Tokyo.
Nov. 24-26	**Annual Scientific Session, Canadian Cardiovascular Society,** Calgary, Alberta, Canada.
Nov. 28-Dec. 1	**International Meeting on Aerospace Medicine, Aviation Medical Society of Australia,** Sydney.
Dec. 5-8	**International Congress on Magnesium in Biophysiopathology and Therapeutics,** Buenos Aires.
Dec. 10-11	**14th National Meeting, French Society of Pediatric Surgery,** Paris.
Dec. 28-30	**42nd All-India Medical Conference, Indian Medical Association,** Dhanbad.

Aspirin Cause of Most Ingestion Accidents

In a report of a survey of the products most frequently named in ingestion accidents among children under five years of age, aspirin accounted for 25.8 per cent of the total cases. This finding is presented in a recent issue of the Bulletin of the National Clearinghouse for Poison Control Centers.

The other items in the 10 most frequently involved categories and the percentage of total ingestions is as follows: soaps, detergents and cleaners, 4.2 per cent; bleach, 3.6 per cent; vitamines and minerals, 3.5 per cent; insecticides, 3.2 per cent; plants, 2.4 per cent; polishes and waxes, 2.2 per cent; hormones, 2.1 per cent; tranquilizers, 2.0 per cent; and other analgesics and antipyretics, 1.9 per cent.

Items such as kerosene, disinfectants, lye and corrosives and laxatives, previously among the 10 most frequent substances, fell below this level in the most recent analysis of the data.

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Personals

Dr. Martin G. Ericsson, who is a senior partner in Medical Associates at Cedar Falls, has left with his wife on their third missionary assignment in the Congo. He will work for approximately one year as a medical missionary in Tandola under the auspices of the Evangelical Mission Covenant Church.

Dr. John P. Cogley, of Cogleywood, was named to the board of governors of the International College of Surgeons, at its meeting in Chicago in August. He had been senior vice president of the College.

Dr. John MacGregor, of Mason City, who recently served on the hospital-teaching ship Hope, now on duty in Nicaragua, spoke, August 29, to the Mason City Rotary Club on his experiences aboard the ship.

Dr. Fred Montz, of Lowden, was honored at a parade and recognition dinner, Saturday, September 10. Dr. Montz has practiced medicine in Lowden for 44 years.

Mrs. Hazel T. Lammey, Executive Assistant at the Iowa Medical Society has been elected President-Elect of the Associated Health Organizations of Iowa for the 1966-67 year. Mrs. Lammey has previously served for three years as Secretary for AHOI.

Dr. H. F. Kiesling, of Lehigh, was honored recently for 50 years of devoted medical service to the community.

Dr. and Mrs. George Malouf, of Sioux Rapids, were guests of honor at an Open House, Wednesday, August 31, welcoming them to the community.

Dr. Don F. Rodawig, Sr., of Spirit Lake, has taken a leave of absence from the Spirit Lake Medical Center to serve as a surgical consultant with the Student Health Service at the Arizona State University in Tempe, Arizona. Dr. Rodawig plans to return to Spirit Lake next June to practice during the summer months.

Dr. Ralph H. Heeren, of Des Moines, director of preventive medicine for the Iowa State Department of Health since 1948, will retire at the end of the year. Dr. Heeren was on the medical faculty of the University of Iowa from 1935 to 1941. He also has taught at Western Reserve University in Cleveland and Tulane University in New Orleans. **Dr. A. M. Reeve**, formerly in charge of preventive medicine for the Second Army at Fort Meade, Maryland, joined the Health Department staff in September.

An extensive article written by **Dr. James F. Bishop**, of Davenport, appeared in an August issue of the Davenport TIMES-DEMOCRAT. In the article Dr. Bishop gave his impressions of Africa, based on his participation in a recent three-week newspaper study mission to that continent.

Tuberculin testing programs have been conducted recently in several Iowa counties. Recent programs have been approved by the Winnebago County Medical Society, the Grundy County Medcal Society, the Fremont County Medical Society, the Butler County Medical Society, and the Lyon County Medical Society.

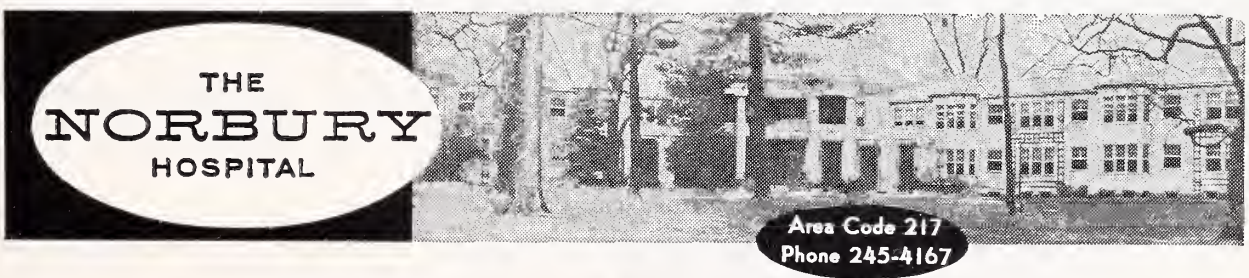

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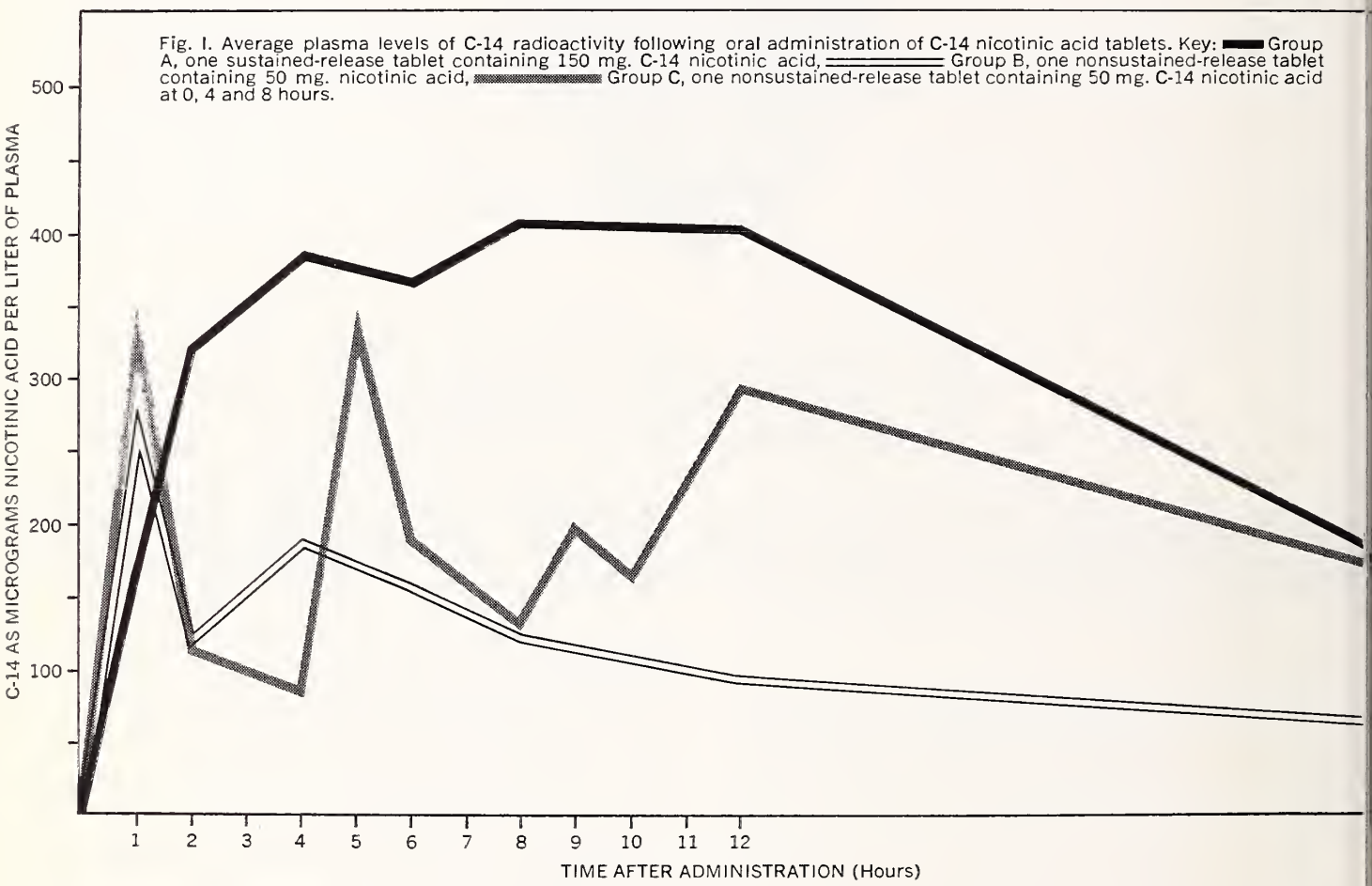
Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▒▒▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be c tinuous on a daily dose of only one Geroniazol TT t let every 12 hours.

The gradual release of nicotinic acid in Geroni TT will provide the well-known peripheral vasodila tion needed in patients with deficient circulation with a minimum amount (if any) of "flushing." A cerebrovascular circulation is complemented by p tylenetetrazol, long-established as a cerebral and piratory stimulant.

Geroniazol TT improves the typical, unfortun signs of senile confusion. Patients become more al

ed and debilitated

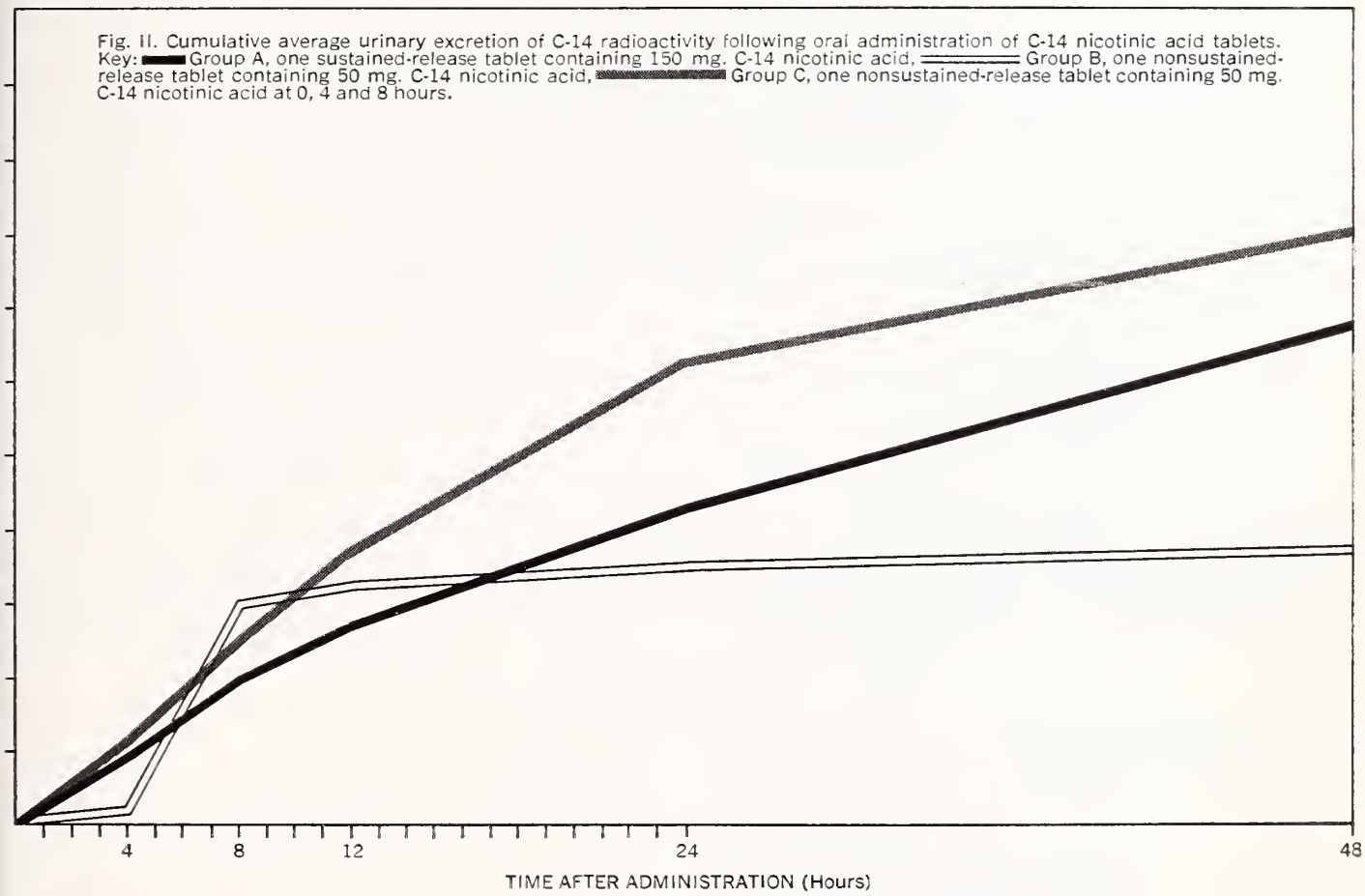


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

s confused and moody. Personal care, memory, otional stability, social attention improve. Fatigue, thy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will mit your patients to enjoy the benefits of time-longed nicotinic acid/pentylenetetrazol therapy, an economical price. Dosage is only one tablet every hours.

ntraindications: There are no known contraindications.

ecautions: Exercise caution when treating patients h a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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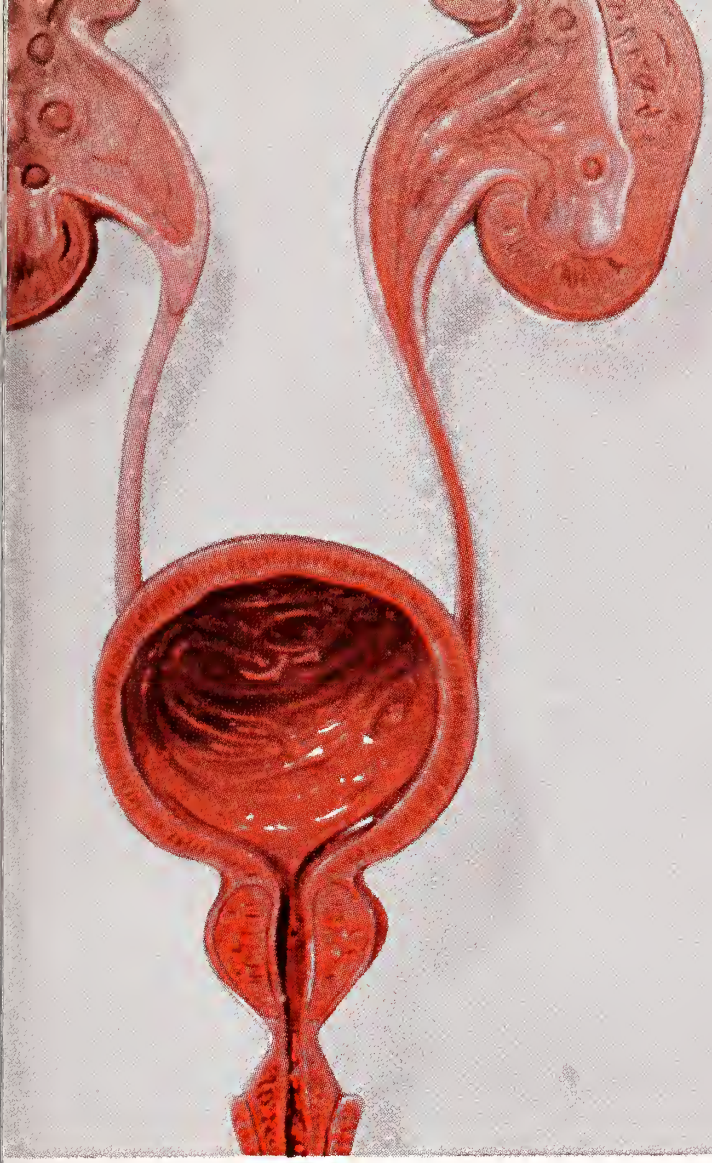

Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
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cations: Urinary tract infections caused by gram-negative and some gram-itive organisms.

e effects: Mainly mild, transient gastrointestinal disturbances; in asional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild inophilia, reversible subjective visual disturbances (overbrightness of ts, change in visual color perception, difficulty in focusing, decrease in ıal acuity and double vision), and reversible photosensitivity reactions. ked overdosage, coupled with certain predisposing factors, has produced f convulsions in a few patients.

cautions: As with all new drugs, blood and liver function tests are advis-e during prolonged treatment. **Pending further experience, like most motherapeutic agents, this drug should not be given in the first trimester regnancy. It must be used cautiously in patients with liver disease or ere impairment of kidney function.** Because photosensitivity reactions have urred in a small number of cases, patients should be cautioned to avoid ecessary exposure to direct sunlight while receiving NegGram, and if a ction occurs, therapy should be discontinued. The dosage recommended adults and children should not arbitrarily be doubled unless under the eful supervision of a physician. Bacterial resistance may develop.

en testing the urine for glucose in patients receiving NegGram, Clinistix® gent Strips or Tes-Tape® should be used since other reagents give a e-positive reaction.

age: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times y) for one to two weeks. Thereafter, if prolonged treatment is indicated, dosage may be reduced to two Gm. daily. Children may be given roximately *25 mg. per pound* of body weight per day, administered in ded doses. The dosage recommended above for adults and children uld not arbitrarily be doubled unless under the careful supervision of a sician. Until further experience is gained, infants under 1 month uld not be treated with the drug.

w suppiled: Buff-colored, scored Caplets® of **500 mg. for adults,** conve-ntly available in bottles of 56 (sufficient for one full week of therapy) and in tles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

ferences: (1) Based on 23 clinical papers, 1512 cases. Bibliography on quest. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: timicrobial Agents and Chemotherapy—1964, Ann Arbor, American ciety for Microbiology, 1965, p. 722.

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eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.

- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

Dr. John D. Caulfield, of New Hampton, has resumed his practice as Eye, Ear, Nose and Throat Specialist after making a complete recovery from recent surgery.

The Wright County Medical Society again helped sponsor a safety rest station for weary motorists during the Labor Day Weekend. The twelfth annual Rest Stop was opened at 4 p.m. Friday and operated continuously until midnight on Monday. The safety rest station, which was begun in Wright County, is now nationally recognized and similar stations have been set up throughout the country.

Dr. Charles Toland, of Mount Pleasant, who has been practicing medicine in Mount Pleasant since July 1962, will be leaving to take special training in obstetrics and gynecology at the U. of I. College of Medicine.

Drs. Gerald McGowan, and **F. M. Stark,** both of Sioux City, have volunteered to serve on the city's Community Council on Alcoholism. The clinic, to be held on a weekly basis for problem drinkers at St. Joseph Mercy Hospital, will be staffed by clergymen, physicians, and nurses who will serve on a volunteer basis.

Dr. John Lanning, of Waukon, has joined the Medical Clinic of Rominger, Bray and Withers as a doctor of internal medicine. Dr. Lanning served his residency in internal medicine at Anker Hospital in St. Paul, Minnesota. He also has taken special training at the Mayo Clinic in Rochester, Minnesota.

Dr. O. L. Frank, of Maquoketa, participated in the dedication of the Richard Drake German Memorial Wing of the Jackson County Hospital on September 18. Dr. Frank is chief of staff at the hospital.

Launching of a $400,000 fund drive to make possible the construction of a new, modern hospital in Forest City was announced recently. Present plans are to sell the old hospital building when the new structure is completed.

Dr. Paul Warner, of Cedar Falls, spoke recently at the opening fall meeting of the Cedar Falls Ministerial Association. His topic was "My Approach to Psychiatric Counseling." Dr. Warner is a psychiatrist with Medical Associates of Cedar Falls.

In honor of **Dr. Lee Forrest Hill,** of Des Moines, the Raymond Blank Hospital Guild has established an annual grant to advance the education of registered nurses in pediatrics. Dr. Hill is director of pediatric education at Raymond Blank Memorial Hospital. He is also director of pediatric education at Broadlawns Polk County Hospital.

Dr. Cecil W. Seibert, of Waterloo, spoke to the House of Delegates of the Iowa Pharmaceutical Association at their Des Moines meeting in August. Dr. Seibert, who is Chairman of the Board of Trustees of the Iowa Medical Society, reviewed the several actions taken by the AMA House of Delegates in Chicago in June relating to relations between medicine and pharmacy.

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Dr. George H. Scanlon, of Iowa City, is currently serving a tour of duty aboard the hospital ship, Hope. The Hope is currently making a port call in Nicaragua. Dr. Scanlon expects to return to Iowa in December.

Dr. S. P. Leinbach, of Belmond, President of the Iowa Medical Society, was one of 16 Iowans who participated in a series of guest editorials presented by WHO television and radio during August. The one-minute recorded messages on subjects selected by the participating organizations were presented twice on television and three times on radio during one day's programming. Dr. Leinbach's remarks were devoted to the subject of direct billing under P.L. 89-97.

Drs. Merton Johnson, R. H. Mordaunt, and **John Conner** are combining forces in Nevada to provide round-the-clock medical service for area residents. They have installed a joint telephone answering service on a special line at the Story County Hospital.

Dr. James Dickens, of Des Moines, has been appointed to the IMPAC Board of Directors and will serve as the Board's Secretary-Treasurer.

Dr. V. W. Swayze, of Muscatine, was a recent speaker before the Weight Watchers Club in that community.

Dr. F. Tulley Hallam, of Des Moines, vice-president and medical director of the Bankers Life Insurance Company, has retired under the company's pension plan after 14 years of service. He joined Bankers Life as associate medical director in 1952, coming from State Life Insurance Company in Indiana, where he had been vice-president and medical director as well as a member of the board of directors. He was elected Bankers Life medical director in April, 1954, and a vice-president in October, 1963. Dr. Hallam is one of the original members of the Board of Life Insurance Medicine and a charter diplomate of this group.

Dr. Douglas K. Packard, Dr. Roger A. Ott, Dr. Luke C. Faber, all of Dubuque; **Dr. Edward Green,** Iowa City; and **Dr. Lawrence Gatzke,** Muscatine, were inducted into the Iowa Academy of Surgery at the organization's annual meeting which occurred recently in Dubuque.

Dr. Earl D. McClean, of Des Moines, recently received a Certificate of Commendation from the Mercy Hospital Medical Staff for his 46 years of service to the Des Moines hospital. Dr. McClean, now retired, has served three times as Chief of Staff at Mercy Hospital and is a Life Member of the Iowa Medical Society.

Dr. William Myerly, of Des Moines, spoke at a statewide conference of senior high school students on "Creative Arts in Medicine." The conference was held in July at Grandview College in Des Moines.

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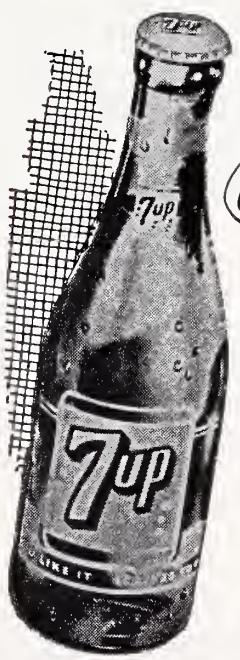


So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Dr. Jesse Landhuis, of Early, is enroute to South Viet Nam for two years with Viet Nam Christian Service, a program that attempts to meet some of the serious medical and health needs of the Vietnamese people. Dr. Landhuis is a graduate of the College of Medicine at the U. of I. He served his internship at San Bernardino County Hospital in California. He has been associated in the practice of medicine with Kersten Clinic in Fort Dodge this summer.

Dr. Paul Warner, psychiatrist, has recently begun his practice with the Medical Associates of Cedar Falls. Dr. Warner was formerly of St. Cloud, Minnesota, where he was on the staff of the Veterans Administration Hospital. He had nine years of general practice previous to his residency in psychiatry.

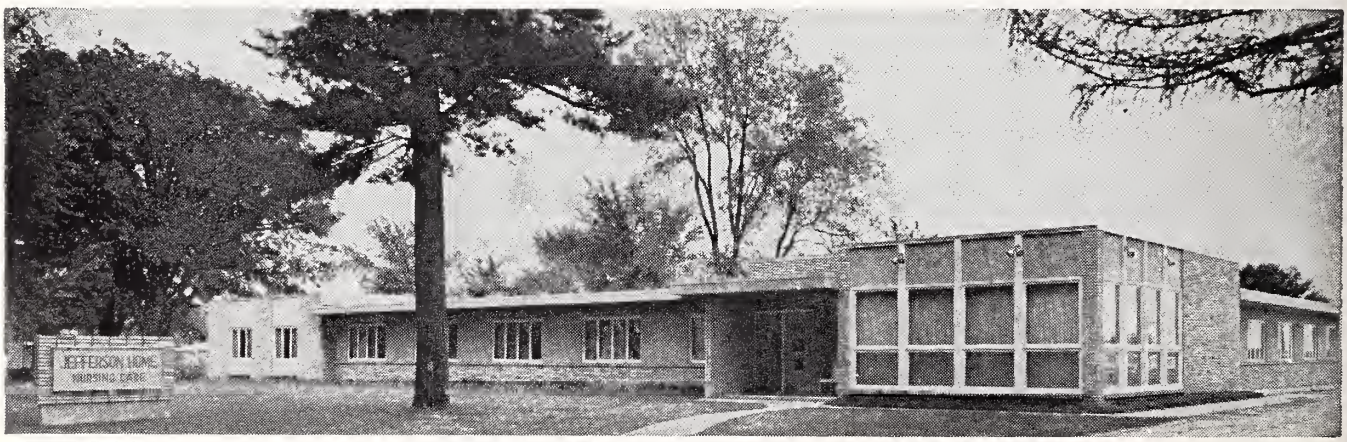
Dr. John C. Hoak, of Iowa City, assistant professor in internal medicine at the U. of I. College of Medicine, spoke recently to members of the Woodbury Medical Society. His topic was "Diagnosis and Management of Bleeding Disorders."

Dr. Delmer Eggert, a native of Mason City, has joined the medical staff of the Mental Health Institute in Mt. Pleasant as a psychiatrist. Dr. Eggert completed his education at U. of I. College of Medicine and interned at Broadlawns Polk County Hospital in Des Moines.

Donald L. Taylor, Executive Vice-President of the Iowa Medical Society, was a speaker at the Annual Fall Clinic of the Iowa Daily Press Association held in Des Moines during September for Iowa newspapermen. Mr. Taylor reviewed the Medical-Radio-Press Code of Cooperation which has been in existence for a number of years. He was presented a Distinguished Service Citation by the IDPA at the meeting.

Dr. John L. Beattie, of Creston, a board member of Union County Chapter of the American Cancer Society, recently addressed the members of the Veterans of Foreign Wars Auxiliary. He spoke on cancer and the Pap test.

Dr. James A. Holte, former Ringsted resident, has become associated in the practice of medicine with **Drs. A. W. Boone** and **J. H. Smith** in Davenport. Dr. Holte was graduated in 1959 from the U. of I. College of Medicine. He interned at San Bernardino County Charity Hospital at San Bernardino, Calif., before returning to Iowa to complete his residency in urology.



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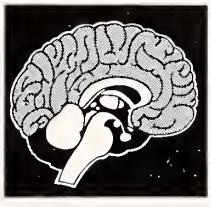
Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.



"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

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Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. **44**:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

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Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug. Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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Dr. Raymond F. Frech, of Newton, was installed as president of the Iowa Chapter of the American Academy of General Practice on September 19 at the organization's annual meeting in Des Moines. **Dr. Amos N. Johnson**, Garland, N. C., president of the American Academy of General Practice, was one of the principal speakers. **Dr. Lee Rosebrook**, of Ames, was chosen new president-elect of the Iowa chapter.

The first Fred M. Smith Lecture in Clinical Cardiology was presented September 22 at the U. of I. College of Medicine. **Dr. Smith** was professor and head of the department of internal medicine at the U. of I. from 1924 until his death in 1946. **Dr. William B. Bean**, who has headed the department since 1948, was the lecturer and spoke on "William Osler—Cardiologist."

One of the speakers at the 27th annual convention of the Iowa Society of Radiologic Technologists held during September at the Holiday Inn in Dubuque was **Dr. Donovan F. Ward**, past president of the American Medical Society.

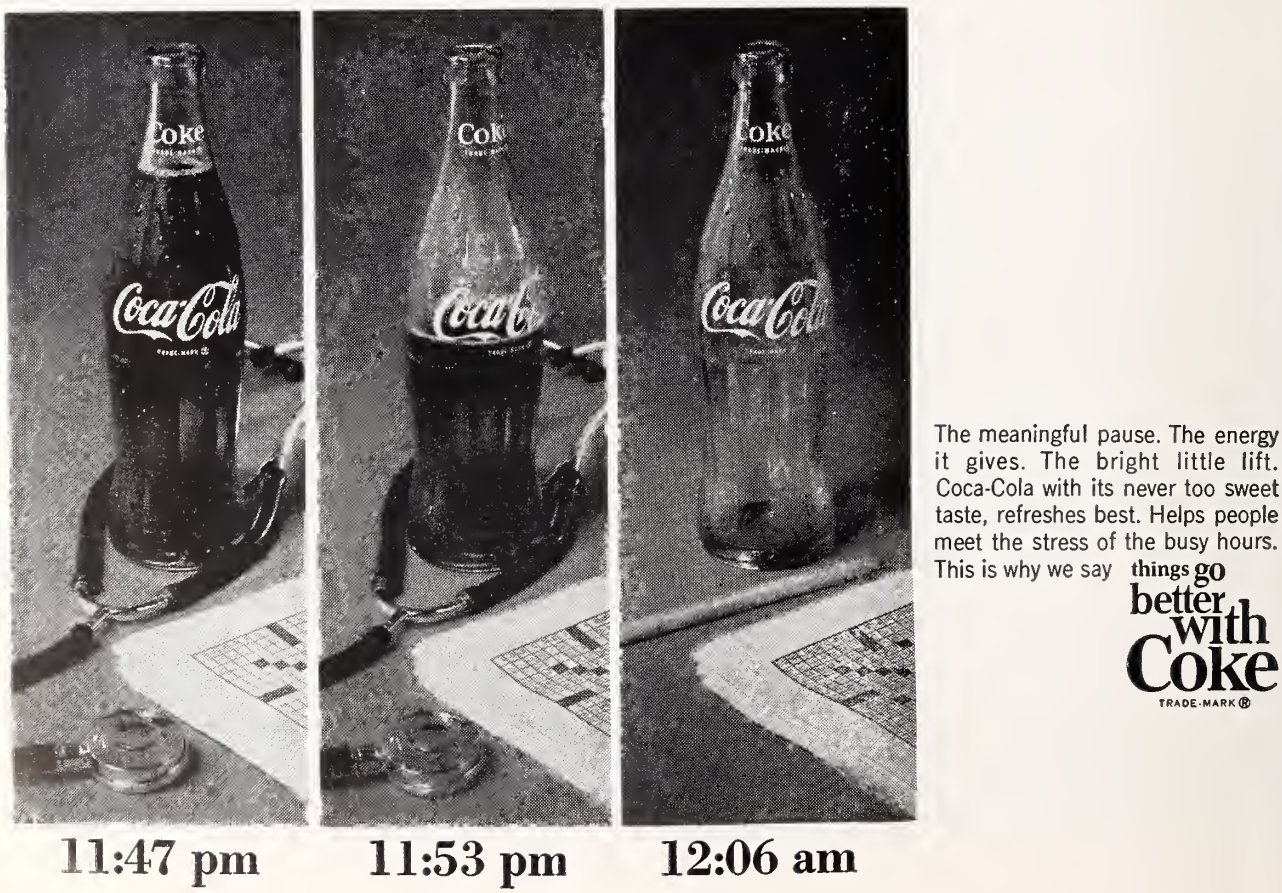
Dr. R. M. Kretzschmar, associate professor of obstetrics and gynecology at the U. of I. College of Medicine, spoke at the annual meeting of the Linn County Cancer Society in September. Dr. Kretzschmar served as volunteer state chairman of the 1965 Cancer Crusade.

Deaths

Dr. James K. Stepp, 76, of Manchester, died September 3, from complications of injuries he received when he became ill and fell. Dr. Stepp had practiced medicine for 55 years before he retired last June 30. He was made a Life Member of both the American Medical Association and the Iowa Medical Society upon completion of 50 years of service as a physician.

Dr. Wendell L. Downing, 72, former President and Chairman of the Board of Trustees of the Iowa Medical Society, died on September 14. He had practiced surgery in LeMars since 1920. In 1962, Dr. Downing was presented the Merit Award of the IMS for his many distinguished contributions to the medical profession.

Dr. Stanley H. Vegors, 65, died on September 14 in Mason City following a short illness.



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Contraindication: Not recommended during pregnancy.

Caution: May be habit-forming. Do not use in patients sensitive to barbiturates or in those with moderate to severe hepatic disease.

Side Effects: Nausea, transitory dizziness, rash. Overdosage of allobarbital produces symptoms typical of acute barbiturate excess.

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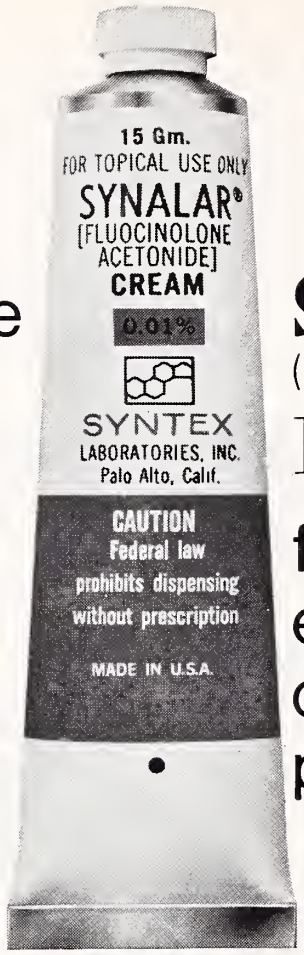

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Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on preg females has not absolutely been established. Therefore, they should n used extensively on pregnant patients, in large amounts, or for prolo periods of time. 2. *Occlusive dressing method*—With occlusion of exte areas, systemic absorption of the corticosteroid may occur, and sui precautions should be taken. Occasional patients may show contact s tivity to a particular dressing material or adhesive. Miliaria, folliculiti pyodermas have been seen infrequently with the use of this technique. development of infection requires appropriate antibacterial therapy an continuation of the occlusive dressing method. Local atrophy and s have been reported with protracted occlusive dressing therapy. While le relapses can be expected to occur in many psoriatic patients, remiss may persist for several weeks to several months in favorable cases. patient whose psoriasis is in an active stage, with recent appearance of lesions, may not be a good candidate and may show early relapse. S plastic films may be flammable, and due care should be exercised in use. Similarly, caution should be employed when such films are used c left near children to avoid the possibility of accidental suffocation. **Effects:** Side effects are not ordinarily encountered with topically app corticosteroids. As with all drugs, however, a few patients may react vorably to Synalar under certain conditions. **References:** 1. Cahn, M. M., Levy, E. J.: J New Drugs 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: J Med Ass 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Duns W. J. R.: Southern Med J 56:797 (Jul.) 1963.

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*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]. . However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

The Month in Washington

Washington, D. C.—A new minimum wage law is expected to cause hospital and nursing home costs to rise.

It brings about 1.5 million workers in hospitals and nursing homes under the federal minimum wage program for the first time. The minimum wage for them is set at $1.00 an hour for next year, $1.15 an hour in 1968, $1.30 an hour in 1969, $1.45 an hour in 1970 and $1.60 an hour thereafter.

The new law also increases the minimum wage for about 30 million workers presently covered to $1.40 an hour on Feb. 1, 1967, and to $1.60 an hour on Feb. 1, 1968.

On a related front, Senate Democratic Leader Mike Mansfield (Mont.) said he believed the Health, Education and Welfare Department was going too fast in enforcing racial desegregation of southern hospitals and schools. He told newsmen he supported the Senate's denial of $500,000 sought by HEW to pay civil rights investigators. He said the Senate wants to see desegregation handled carefully rather than impulsively.

Hospital and school authorities "will be on trial," Mansfield said, and if they abuse the suggested latitude, Congress can move quickly to correct the situation.

"We have to take things slowly . . ." he said. "This is an area of great delicacy. The thing to do is to do it right and not precipitously."

The Senate approved legislation that would give nursing homes more liberal payment for medicare patients. The bill amends the definition of reasonable costs to include return on the fair market value of the facilities. The existing federal reimbursement formula is two percent above operating costs. Nursing home operators contend this is too low.

HEW Undersecretary Wilbur Cohen said the government will watch carefully to determine whether patients are admitted unnecessarily to hospitals next year in order to qualify them for medicare's nursing home benefits. The law requires that nursing home benefits be made available only to medicare beneficiaries who have had a hospital stay of three days or more and only when the nursing home care is considerd an extension of the hospital treatment. However, several bills have been introduced in Congress to eliminate the hospital stay requirement.

* * *

The American Medical Association supported a bill that would extend the air pollution program and authorize increased appropriations for it.

In a letter to a Senate subcommittee, Dr. F. J. L. Blasingame, executive vice president of the AMA, noted that the Association's House of Delegates in June, 1965, had adopted a statement recognizing the health hazards resulting from air pollution and recommending that feasible reduction of all forms of air pollution should be sought by all responsible parties. The pending bill (S. 3112) "can further this end," he said.

"We believe the effect of this amendment will be beneficial," he said. "The grant mechanism should bolster local and regional operations, encouraging a greater degree of local initiative, particularly in interstate and intermunicipal areas. In addition, the bill would eliminate a serious inequity in the present law. Certain metropolitan regions are penalized in that they cannot obtain assistance for maintaining their currently large and expensive programs, while a metropolitan region without a program could receive up to two-thirds of the cost of creating a new program. Under the proposed legislation this inequity would be eliminated."

* * *

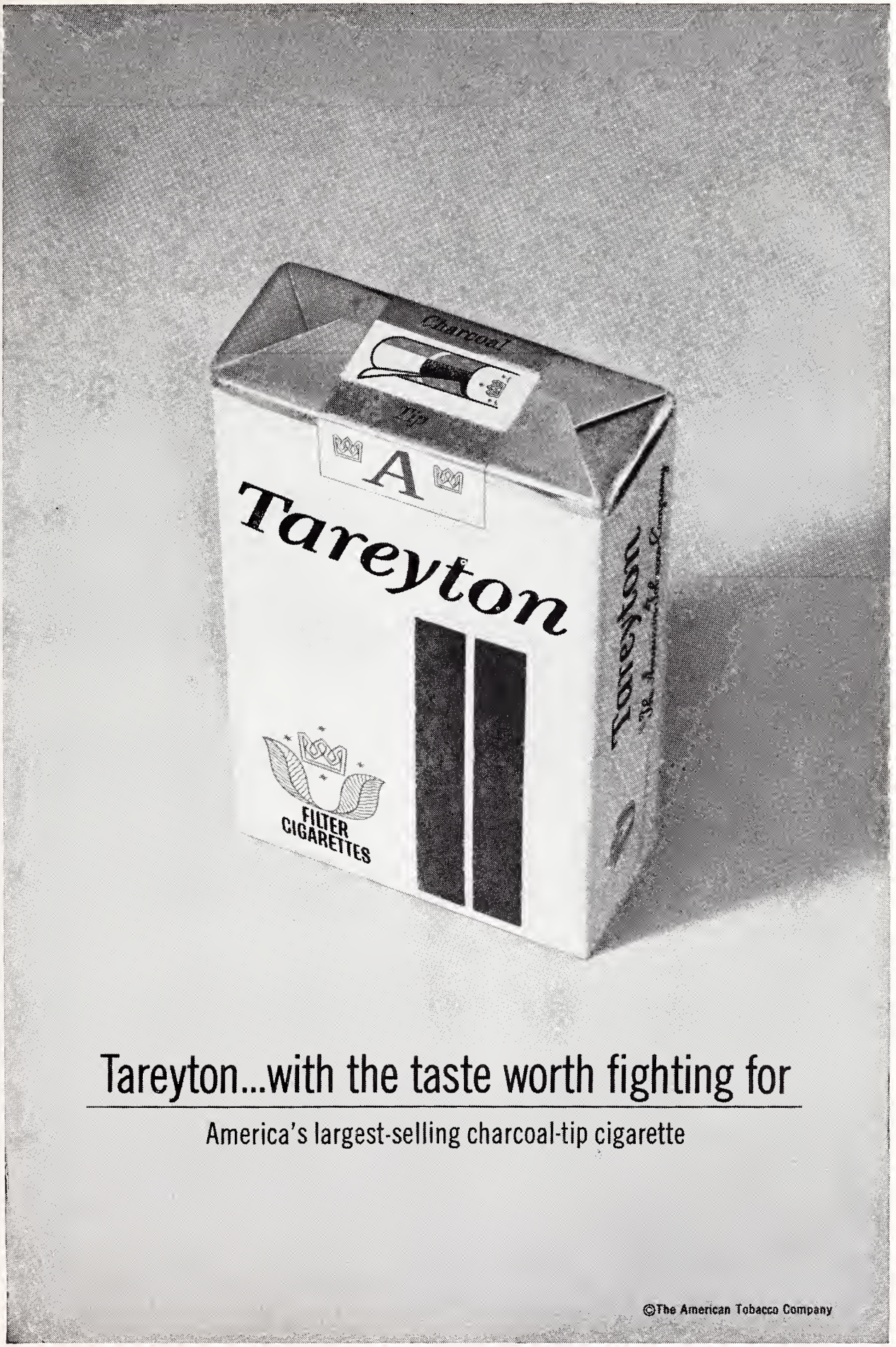
The Senate cleared the path for a new approach to narcotics addiction which would substitute hospital treatment for long-term prison sentences.

The Senate approved the legislation by voice vote without dissent and sent it to a Senate-House conference committee for adjustment of differences with a House version.

The key to the bill is civil commitment for the addict involved in a non-violent crime. It would provide voluntary pre-trial commitment in lieu of prosecution and compulsory post-conviction commitment in lieu of punishment. In addition, the bill would provide voluntary and compulsory commitment of certain addicts not charged with any crime. The addicts would be committed to the Surgeon General for confinement and treatment in a hospital or institution. Treatment would continue within the community after the addict is discharged.

The legislation also would establish federal post-hospitalization treatment centers and also give courts more flexibility in dealing with youthful drug offenders.

Sen. John L. McClellan, D-Ark., who brought the bill to the Senate floor, said it "affords an opportunity for narcotics addicts who wish to extricate themselves from a hopeless life of addiction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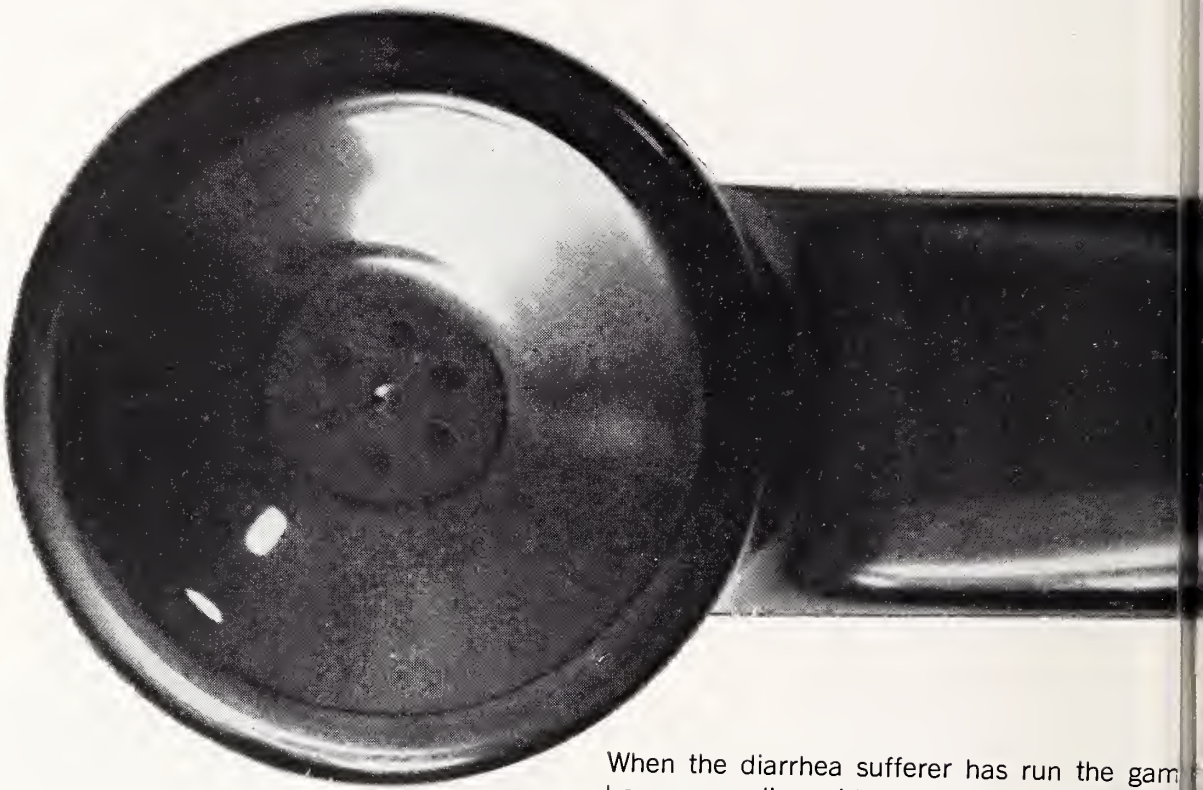

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and crime to have themselves committed for treatment."

"It also affords a civil, non-penal procedure for the compulsory commitment of addicts not charged with a crime so they may be cured and rehabilitated before they are forced by their addiction into a repetitious pattern of addiction and crime," he added.

Sen. Thomas J. Dodd, D-Conn., who for years has studied the problem of narcotics, said the bill "will lead to a wiser, more humane, and more effective treatment of narcotics addicts. . . ." He said the Senate was undoing the mistake of 10 years ago when it wrote legislation which made "super-criminals" out of many narcotics addicts.

* * *

An industry spokesman said drug makers and distributors will comply with a government request that the number of candy-flavored children's aspirins per bottle be limited to 25.

A limit of 50 tablets per bottle was agreed upon in a government-industry conference in 1955 and has been observed by producers of 95 per cent of all children's aspirins. However, some authorities consider this number now to be dangerous, even lethal under some conditions, when taken by a child.

Instead of including a number-per-bottle limitation on children's aspirin in a "child protection" bill, the House Commerce Committee urged that the Food and Drug Administration seek voluntary cooperation from the aspirin industry. The spokesman said the industry would cooperate and that 25 one-quarter grains generally was accepted as a non-hazardous amount.

The House and Senate approved differing versions of the legislation which would ban the sale of children's toys containing hazardous substances. It was left for a conference committee to adjust the differences.

Both versions also would ban dangerous household substances that cannot be made safe by cautionary labeling. These include such items as a flammable and explosive water repellant blamed for three deaths.

Infection as Possible Cause of Arthritis

A new, previously unidentified member of the bedsonia group (psittacosis agents) has been isolated from a small number of patients with Reiter's syndrome. Acute arthritis was subsequently produced in eight Macacairius monkeys who received intra-articular injections of the new bedsonia agent obtained from the synovial specimen of one Reiter's patient.

Two reports concerning these preliminary findings and their implications were presented to the annual meeting of the American Rheumatism Association in Denver last month. According to the research team at the University of California San Francisco Medical Center that has worked on the project for a year and a half, there is insufficient evidence as yet of a possible etiologic role for bedsonia in the human disease. It will take a few years to assess the full significance of bedsonia in relation to Reiter's syndrome and perhaps to other forms of arthritis. But large-scale isolation attempts from normal and diseased arthritic joints and extensive new monkey studies will be undertaken.

Julius Schachter, Ph.D., of the George Williams Hooper Foundation, the microbiologist of the team, described the methods of isolating the new bedsonia agent. Bedsoniae are a genus of the psittacosis-lymphogranuloma venereum-trachoma (PLT) group of organisms. They are considered bacteria that must be treated like viruses because of their refusal to grow on artificial media.

Dr. Ephraim P. Engleman, clinical professor of medicine of the University of California and program director of one of 15 Arthritis Foundation-supported clinical research centers, reported that positive isolations were obtained from urethral, conjunctival and joint (knee, ankle and elbow) specimens from seven out of nine patients. All but one of these patients presented the classic Reiter's triad of conjunctivitis, urethritis and polyarthritis.

Complement fixation titers against a psittacosis antigen of 1:16 or greater were seen in four of the nine patients. Subsequently, of 200 patients with rheumatic diseases who were selected at random, seven had titers as high as 1:16 or higher. Of these seven reactors, an isolate of the bedsonia agent was obtained from the knee of one patient who had arthritis but not urethritis or conjunctivitis.

For identification of this agent, isolates taken from the patients were cultured in embryonated eggs, noted Dr. Schachter. Infected yolk-sac suspensions, sometimes after a second or third passage, were injected into selected knee joints of the monkeys. Within 48 hours, the knees of monkeys became red, warm, swollen and tender. The acute attack of arthritis persisted approximately one week. Within two weeks, permanent damage in the form of flexion contraction—an incapacity to straighten the leg—was noted.

What about the significance of this research? Dr. Engleman feels that these results raise more questions than the team is now able to answer. As of this moment, he stated, no new effective therapeutic approach has emerged from these findings. Though bedsoniae are often sensitive to the tetracyclines, use of these drugs seems not to affect the course of the disease in patients with Reiter's syndrome. However, it is hoped that future sensitivity studies of the agent will reveal some useful drugs.

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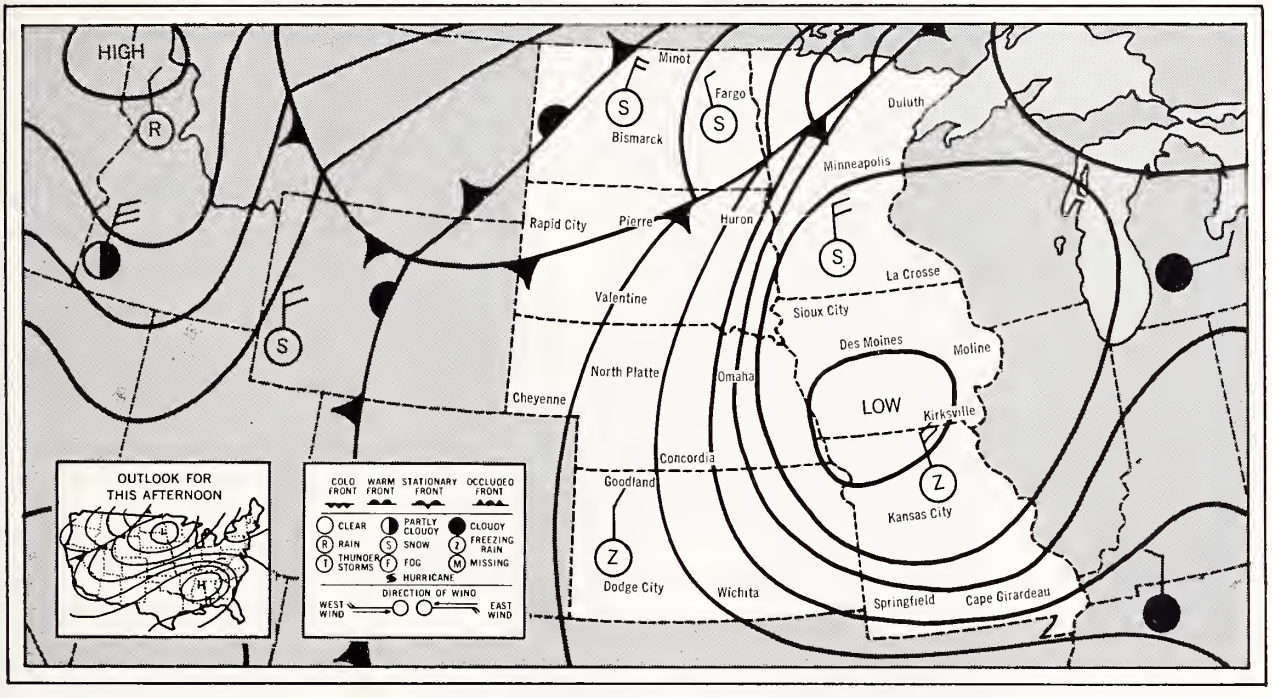

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Terpin hydrate	180 mg.
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Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. *Side effects:* Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. *Precautions:* The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

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vignettes of angina pectoris—
no. 1 in a series:

angina and the surgeon

John Hunter—
British surgeon (1728-1793)

angina of anger

"My life is in the hands of any rascal who chooses to annoy and tease me."[1] So said the great British surgeon and anatomist, John Hunter, realizing that he could not control the anger which precipitated frequent and severe attacks of angina pectoris. According to Mettler: "His statement was no exaggeration. On October 16, 1793, he attended a meeting of the St. George's hospital staff, and, while defending the interests of several students, he was contradicted and thoroughly antagonized. The pains of angina commenced, he started toward another room, gained it, and fell dying into the arms of a physician."[2]

Why Edward Jenner withheld his paper on angina In 1777, at an earlier stage of the condition, Hunter's angina alarmed a favorite pupil, Edward Jenner, who wrote to Dr. Heberden that he feared his teacher was "affected with symptoms of the Angina Pectoris."[3] So concerned was Jenner about his former teacher's emotion-related condition that he deliberately cancelled publication of a paper on angina pectoris, fearing that Hunter would read it, and have "his fears excited by its truly formidable nature."[4]

Severity of angina described Hunter's brother-in-law, Dr. Everard Home, who witnessed hi death and performed an autopsy, gave this account of the later stag of the condition:

"... the pain became excruciating at the apex of the heart; the thro was so sore as not to allow of an attempt to swallow anything and the left arm could not bear to be touched....

"The affections above described were, in the beginning, readily brought on by exercise ... but the at last seized him when lying in bed, and in his sleep...."[5]

18th century ancestor of the modern coronary candidate Surgeon, anatomist, pathologist, physiologist, geologist, and teache Hunter had a passion for research which led him to disregard his practice, his health and even the

When the Irish giant O'Brien
ied that Hunter desired his
ton for a museum, he willed
his body be sunk at sea in a
coffin. But Hunter was not to
enied. According to Major, he
ribed the watchers and finally
ined the body at a cost of 500
ids although he had to borrow
noney to pay the men."[3]
'67, he experimentally inocu-
himself with gonorrhea and
ilis, treated himself with
ury for three years, and was
rently cured.[5] Hunter had
ngs of inadequacy about his
ation and speaking ability,
his did not prevent him from
g hard driving and abrupt
his colleagues. His competi-
ess with his physician older
ner was also well known, and
d in complete estrangement
een the two men.[2,3] Today, the
nality traits seen in John
ter are recognized to be impor-
predisposing factors in the devel-
ent of coronary artery disease—
manifested as angina pectoris.
rding to Friedman and Rosen-
,[6] in a group of men whose be-
or was characterized by intense
ition and competitive drive,
ater than average incidence
gina pectoris was among those
rmal conditions noted.

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in the modern
management of
angina pectoris

Peritrate® SA

Sustained Action (pentaerythritol tetranitrate) 80 mg.

Each double-layer, biconvex, dark green/light green tablet of Peritrate SA Sustained Action contains:
pentaerythritol tetranitrate . . . . . 80 mg.
(20 mg. in immediate release layer and 60 mg. in sustained release base)

Peritrate (pentaerythritol tetranitrate) is a nitric acid ester of a tetrahydric alcohol (pentaerythritol).

Actions: The exact cause of angina pectoris (that is, the pain associated with coronary artery disease) remains obscure, despite the numerous and often conflicting hypotheses concerning its pathophysiology. Therapy at the present time, therefore, remains essentially empiric. Customarily, clinical improvement has been measured by: reduction in (1) number, intensity and duration of angina pectoris attacks and (2) necessity for glyceryl trinitrate intake for prevention or relief of anginal attacks.

Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. has been reported in clinical usage to reduce in number and severity the incidence of angina pectoris attacks, with concomitant reduction in glyceryl trinitrate intake.

In the evaluation of Peritrate (pentaerythritol tetranitrate) and Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. in angina pectoris, clinical improvement has been customarily measured subjectively by reduction in number and severity of attacks and necessity for glyceryl trinitrate intake for prevention or abortion of anginal attacks. Individual patterns of angina pectoris differ widely as does the symptomatic response to antianginal agents such as pentaerythritol tetranitrate. The published literature contains both favorable and unfavorable clinical reports. In conjunction with total management of the patient with angina pectoris, Peritrate (pentaerythritol tetranitrate) and Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. have been accepted as safe for prolonged administration and widely regarded as useful.

Animal pharmacology: In a series of carefully designed studies in pigs, Peritrate (pentaerythritol tetranitrate) was administered for 48 hours before an artificially induced occlusion of a major artery and for seven days thereafter. The pigs were sacrificed at various intervals for periods up to six weeks. The result showed a significantly larger number of survivors in the drug-treated group. Damage to myocardial tissue in the drug-treated survivors was less extensive than in the untreated group. Pigs rather than dogs were used because their coronary artery distribution more closely resembles that of human beings. Studies in dogs subject to oligemic shock through progressive bleeding have demonstrated that Peritrate (pentaerythritol tetranitrate) is vasoactive at the postarteriolar level, producing increased blood flow and better tissue perfusion. These animal experiments cannot be translated to human behavior

Indications: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. is indicated for the relief of angina pectoris (pain associated with coronary artery disease). It is not intended to abort the acute anginal episode but is widely regarded as useful in the prophylactic treatment of angina pectoris.

Contraindications: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. is contraindicated in patients who have a history of sensitivity to the drug.

Warning: Data supporting the use of Peritrate (pentaerythritol tetranitrate) during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Should be used with caution in patients who have glaucoma.

Adverse reactions: Side effects reported to date have been predominantly related to headache (which may require discontinuation of medication) and gastrointestinal distress which are usually transient with continuation of medication.

Dosage: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg., 1 tablet immediately on arising and 1 tablet 12 hours later (on an empty stomach).

Additional dosage forms
Peritrate (pentaerythritol tetranitrate)—10 mg. and 20 mg. tablets with or without phenobarbital.

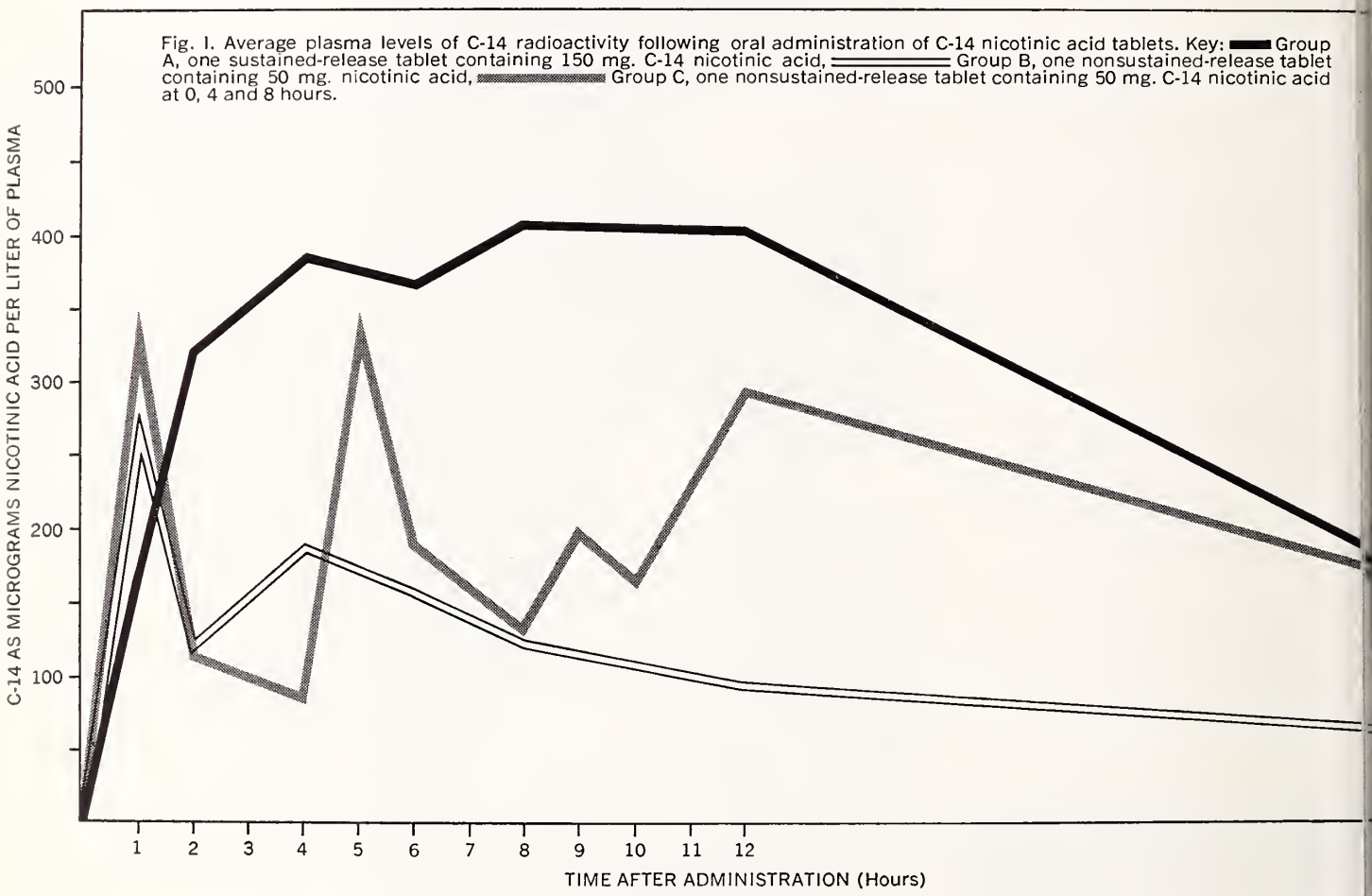
Peritrate with Phenobarbital SA Sustained Action—80 mg. pentaerythritol tetranitrate and 45 mg. phenobarbital.

(Warning: Tablets containing phenobarbital may be habit forming.)

WARNER-CHILCOTT
Morris Plains, N. J.

Sustained circulatory, respirato and cerebral stimulation for t

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be c tinuous on a daily dose of only one Geroniazol TT let every 12 hours.

The gradual release of nicotinic acid in Geroni TT will provide the well-known peripheral vasodil tion needed in patients with deficient circulation with a minimum amount (if any) of "flushing." A cerebrovascular circulation is complemented by p tylenetetrazol, long-established as a cerebral and piratory stimulant.

Geroniazol TT improves the typical, unfortun signs of senile confusion. Patients become more al

ed and debilitated

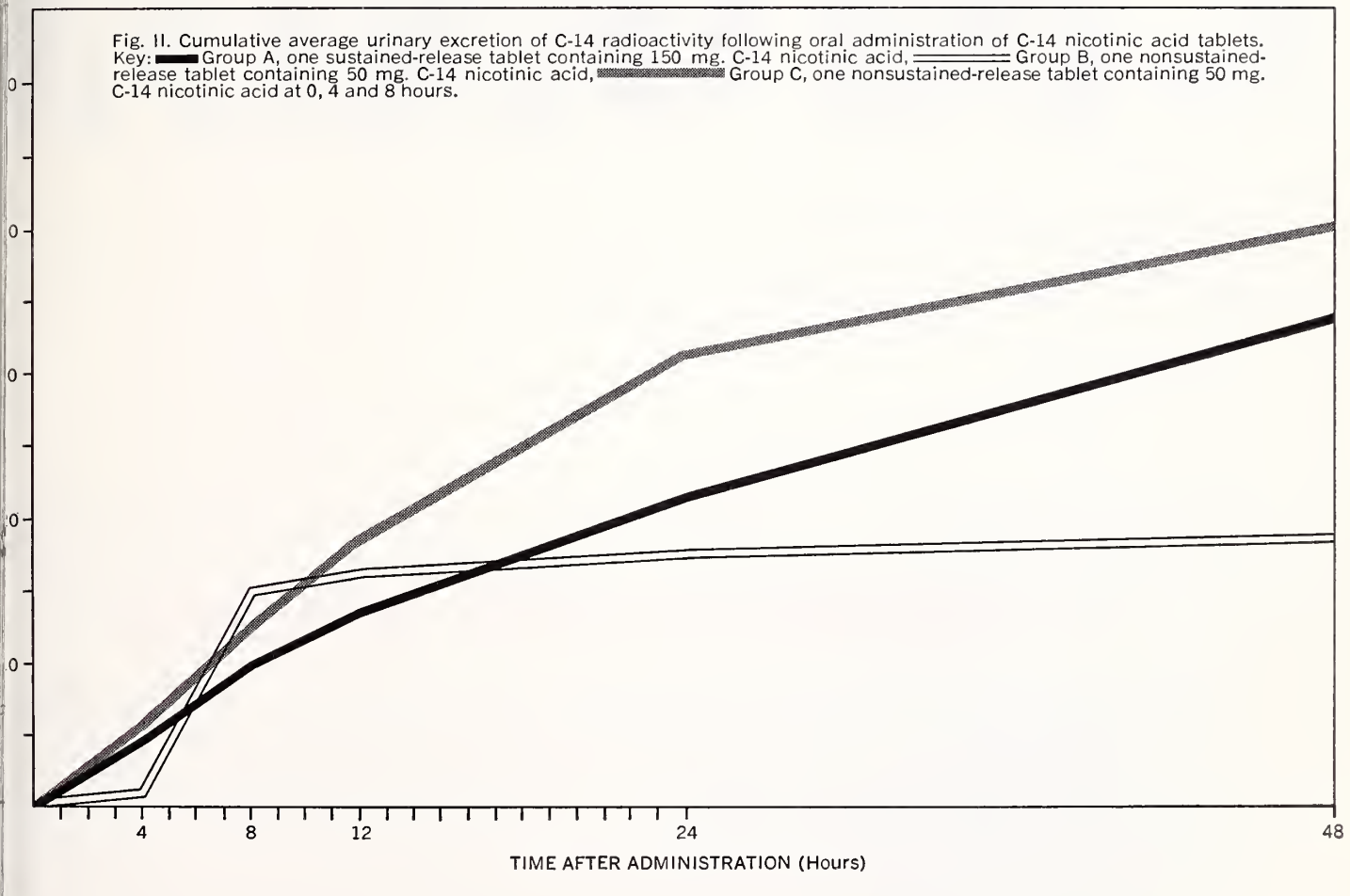


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒▒▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

s confused and moody. Personal care, memory, otional stability, social attention improve. Fatigue, thy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will mit your patients to enjoy the benefits of time-longed nicotinic acid/pentylenetetrazol therapy, n economical price. Dosage is only one tablet every hours.

traindications: There are no known contraindica-ns.

cautions: Exercise caution when treating patients h a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

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"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

now...introducing a **new** high-strength dosage f

SIGNEM

A 'MAXIMUM SECURITY' ANTIBIOTIC*

* THE BROAD RANGE DEPENDABILITY OF TETRACYCLINE
  long established as the broad-spectrum agent of first choice in a wide variety of infections
* WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT
  triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline
* ESPECIALLY VALUABLE IN U.R.I.
  provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered
* NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY
  Signemycin 375—high-potency capsules for simpler administration, greater patient economy

YCIN® 375

(tetracycline 250 mg. triacetyloleandomycin 125 mg.)

ndications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug.

Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

ROERIG Rx
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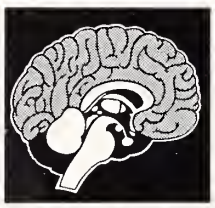
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-being®
New York, N.Y. 10017

Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.



"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. **44**:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

RAUTRAX®-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)

Coming Meetings

IN STATE

Nov. 1-2 **Postgraduate Conference on Surgery, University of Iowa College of Medicine,** Iowa City.

Nov. 8-9 **Postgraduate Conference, Nursing Institute on the High-Risk Mother and Child,** University of Iowa College of Medicine, Iowa City.

Nov. 18-20 **Postgraduate Conference on Pediatrics-Radiology-Urology, University of Iowa College of Medicine,** Iowa City.

Nov. 18-20 **Postgraduate Conference on Pediatrics-Radiology-Urology,** University of Iowa College of Medicine, Iowa City.

Dec. 9 **Cardiac and Respiratory Disease Conference,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Nov. 2-3 **American College of Preventive Medicine,** San Francisco Hilton, San Francisco.

Nov. 2-4 **Postgraduate Course on Management of Fractures,** University of Colorado School of Medicine, Denver.

Nov. 2-5 **1966 Annual Meeting of the American Medical Women's Association, "Sexual Problems in Clinical Practice,"** International Inn, Washington, D. C.

Nov. 3 **American Association for the Study of Liver Diseases,** Sheraton Hotel, Chicago.

Nov. 4-5 **7th Annual MD-DAY, University of Missouri Medical Center,** Medical Center Auditorium, Columbia.

Nov. 5 **Annual Tumor Seminar, Minnesota Society of Clinical Pathologists,** Minnesota Club, St. Paul.

Nov. 6-9 **Medical Society of Virginia,** Williamsburg Lodge, Williamsburg.

Nov. 7-11 **Postgraduate Course on Endocrine and Metabolic Disorders, American College of Physicians,** Louria Auditorium, The Jewish Hospital of Brooklyn, Brooklyn.

Nov. 9 **Symposium on Management of the Chronic Disease Patient, "Low Back Pain,"** sponsored by **United States Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Nov. 9-11 **Tennessee Academy of General Practice, 18th Annual Scientific Assembly,** Gatlinburg Auditorium, Gatlinburg.

Nov. 11 **9th Annual Symposium on Diabetes, Diabetes Association of Greater Chicago,** Michael Reese Hospital, Chicago.

Nov. 11 **Postgraduate Course on Coronary Arteriography,** Hahnemann Medical College and Hospital, Philadelphia.

Nov. 11-12 **Association of Clinical Scientists Seminar, "The Laboratory Diagnosis of Liver Diseases,"** International Inn and The Washington Hospital Center, Washington, D. C.

Nov. 11-13 **19th Annual Conference on Engineering in Medicine and Biology,** Sheraton-Palace Hotel, San Francisco.

Nov. 14-18 **Postgraduate Course on Newer Aspects of Experimental and Clinical Allergy, American College of Physicians,** Sheraton-Boston Hotel, Boston.

Nov. 14-18 **11th Annual Course in Occupational Health for Nurses,** New York University Medical Center and American Association of Industrial Nurses, New York.

Nov. 15 **14th Annual Sigmund Pollitzer Lecture, "Virus, Cell and Host Relationship in Varicella-Zoster Infections,"** New York University Medical Center, New York City.

Nov. 17-19 **Florida Pediatric Society,** Beach Club Hotel, Ft. Lauderdale.

Nov. 18-19 **American College of Physicians Michigan Regional Meeting,** Detroit.

Nov. 19 **Nebraska Mid-State Medical Conference, "Female Hormone Therapy—Recent Advances," Buffalo County Medical Society,** Holiday Inn, Kearney, Nebraska.

Nov. 19-20 **American College of Physicians New Jersey Regional Meeting,** Asbury Park.

Nov. 23 **Symposium on Management of the Chronic Disease Patient, "Leukemia,"** sponsored by **United States Public Health Service,** Mount Sinai Hospital Medical Center, Chicago.

Nov. 27-30 **AMA 20th Clinical Convention,** Las Vegas.

Nov. 27-30 **8th National Conference on the Medical Aspects of Sports,** sponsored by **The American Medical Association,** Caesar's Palace, Las Vegas.

Nov. 28-29 **3rd Research Conference of the Parkinson's Disease Information and Research Center,** Alumni Auditorium, College of Physicians and Surgeons, New York.

Nov. 28-30 **Nevada State Medical Association,** The Dunes, Las Vegas.

Nov. 28-Dec. 1 **3rd Annual Postgraduate Course on Pulmonary Function in Health and Disease, American Thoracic Society,** Auditorium, Tulane University School of Medicine, New Orleans.

Nov. 28-Dec. 2 **Progress in Gastroenterology—1966, American College of Physicians,** The Annenbert School of Communications, Philadelphia.

Nov. 29-Dec. 1 **American Academy for Cerebral Palsy,** Broadwater Beach Hotel, Biloxi-Gulfport, Mississippi.

Dec. 1 **American College of Physicians Eastern Pennsylvania Regional Meeting,** Philadelphia.

Dec. 5-7 **Postgraduate Course on Theory and Application of Gas Chromatography in Industry and Medicine,** Hahnemann Medical College and Hospital, Philadelphia.

Dec. 5-9 **Postgraduate Course on What the Internist Should Know About Cancer, College of Physicians and Surgeons of Columbia University,** Francis Delafield Hospital, New York.

Dec. 7 **Symposium on Management of the Chronic Disease Patient,** Mount Sinai Hospital Medical Center, Chicago.

Dec. 7-8 **Conference on Current Concepts in Arthritis, University of Missouri Medical Center,** Medical Center Auditorium, Columbia.

Dec. 8 **American College of Physicians Texas Regional Meeting,** Houston.

Dec. 8-10 **American College of Physicians North Carolina Regional Meeting,** Charlotte.

Dec. 9-10 **American College of Physicians New Mexico Regional Meeting,** Albuquerque.

Dec. 10 **American College of Physicians Arizona Regional Meeting,** Phoenix.

Dec. 12-14 **20th Postgraduate Assembly in Anesthesiology, New York State Society of Anesthesiologists,** New York Hilton Hotel, New York.

Dec. 12-14 **17th Hahnemann Symposium: Renal Failure,** Hahnemann Medical College and Hospital, Philadelphia.

Dec. 14-17 **Postgraduate Course on Infectious Diseases,** University of Pittsburgh School of Medicine and Medical Center, Pittsburgh.

ABROAD

Nov. 1-5 **American Fracture Association,** Caracas, Venezuela.

Nov. 13-16 **6th Latin-American Congress of Otorhinolaryngology,** Mexico City.

Nov. 13-19 **5th Latin-American Congress of Gynecology and Obstetrics,** Santiago, Chile.

Nov. 17-19 **6th Annual Far East Session, American College of Physicians,** Tokyo.

Nov. 24-26 **Annual Scientific Session, Canadian Cardiovascular Society,** Calgary, Alberta, Canada.

Nov. 28-Dec. 1 **International Meeting on Aerospace Medicine, Aviation Medical Society of Australia,** Sydney.

Dec. 5-8 **International Congress on Magnesium in Biophysiopathology and Therapeutics,** Buenos Aires.

Dec. 10-11 **14th National Meeting, French Society of Pediatric Surgery,** Paris.

Dec. 28-30 **42nd All-India Medical Conference, Indian Medical Association,** Dhanbad.

How long will it take her to recover from her hip fracture if she just doesn't care?

Does she really care?
s she alert, encouraged,
ositive and optimistic
bout getting completely
ell soon?
Or has she given in to
ie demoralizing impact
f confinement, disability
nd dependency?
When functional fatigue
omplicates convalescence,
lertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.
And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell
THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Norinyl® tablets

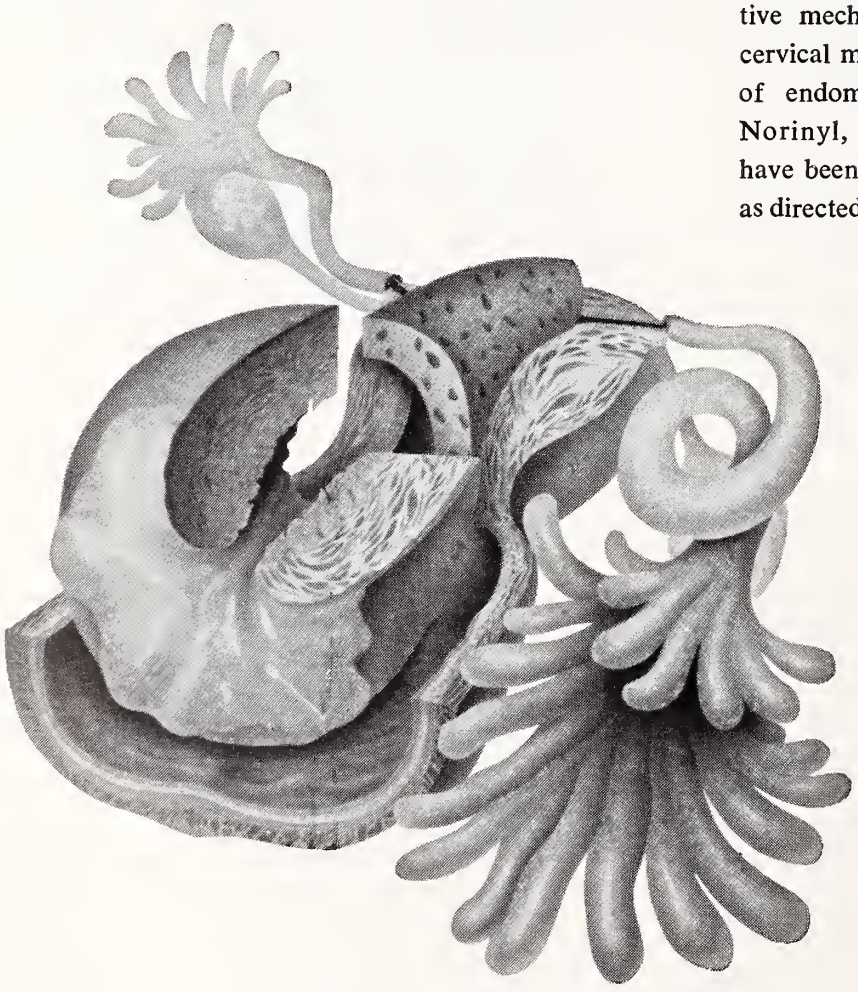
(norethindrone 2 mg. c̄ mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.

Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets

(norethindrone 2 mg. c̄ mestranol 0.1 mg.)

for multiple contraceptive action

New York City Board of Health Forbids Secret Pasteurization

(New York City, 1906)

In New York City in 1906, 60 years ago, the New York City Board of Health forbade secret pasteurization of milk.*

Despite the fact that pasteurization destroys disease-producing bacteria, the New York City Board of Health did not fix time and temperature requirements for pasteurization until 1910. For the benefit of younger readers, following are some of the pathogenic bacteria destroyed by pasteurization:

Human tuberculosis, bovine tuberculosis, typhoid fever, paratyphoid fever, scarlet fever, streptococcus sore throat, undulant fever, diphtheria and dysentary.

The need for pasteurization was communicated to the American public, at least to a significant degree, through specific statements in sales and advertising that pasteurized milk would protect against specific diseases which might otherwise be a menace. Even the temperatures required for protection were cited.

Personally, I know that such selling was done, because in the late 20's and early 30's, I participated in it, upon literally hundreds of occasions.

*Preventive Medicine May Be Best Answer***

Had preventive medicine been universally practised in 1906, conceivably such method might not have been necessary. But preventive medicine was not generally practised in 1906 nor is it universally practised in 1966.

Such a goal is an ideal, hardly a fact accomplished. According to the Department of Defense, in the year starting July 31, 1964 to July 1, 1965, 930,088 men were examined for the armed forces. Of these 445,636, or 47.9%, were rejected for reasons of mental or physical health. Today, almost 50% of the American public has some kind of trouble with weight, being either too fat or too thin. Even one out of three children is alleged to have some difficulty in this regard.

According to present statistics, one out of ten Americans may be doomed to spend part of his life in a hospital for mental or emotional disturbance. By no means has this problem been fully resolved with regard to its legal, biochemical, nutritional, sociological, or psychological aspects, any more than the problem of war has been completely resolved in human affairs.

Any reputable psychiatrist would be shocked at the suggestion that the problems of his profession might be resolved through truth by proclamation. Many times the present number of people should be interested in mental health.

By no present legislation may the American citizen be deprived of his right to information, through truth by proclamation. Presently he has the same right to information about his health as the raiser of livestock has to information about hogs.

True, some of the material by which minds may be fertilized may be criticized. Such is the price of freedom. Distortion for profit should certainly be discouraged. And the public should also be protected against the possibility of distortion of law through regulation denying the public the right to information.***

Such distortion could cut off the cultural growth of this nation at its roots, could mentally maim this nation into a second-rate power through medieval meddling of a kind abandoned more than 1,000 years ago.

Even preventive medicine must depend upon communication for its effectiveness rather than by policing through regulation.

For regulation must inevitably involve the weakness of individual opinion expressed as dogmatic truth.**** Such regulation must simply serve as a means of controlling advertising through labeling, beyond the intent of Congress, according to convenience, advantage or prejudice through truth by proclamation.

Roberts Dairy began business in 1906. Since that time this company has supplied information to the public about health supported by substantiation such as might support a scientific paper. We feel that such policy has been and is now in the public interest.

J. Gordon Roberts

Published in the Public Interest by

Roberts Dairy Company

General Offices: Omaha

* *Market Milk and Related Products, P. 106, Hugo H. Sommer, Ph.D., 1946, Madison, Wisconsin.*

** *Our company has advertised that medical counsel should be followed with regard to any vitamin fortification whatever, irrespective of source, as in the evening OMAHA WORLD-HERALD, July 12, 1965. However, no food product we sell is dangerously overloaded with vitamins A and D, as may be true of some items sold without prescription.*

*** *With or without fortification, milk may hardly be described in a one-to-one relationship to any vitamin as with a vitamin pill. Fortification may simply amplify what is already present in unpasteurized milk.*

**** *Any attempt to withhold the vitamin C from cow's milk which is present in human milk — or to prevent the communication of scientific research to the public about this — may conceivably appear sixty years from now just as ill-advised as the action by the New York City Board of Health regarding pasteurization in 1906.*

Most of my patients with high blood pressure are as old as I am. A lot of them are living on pensions. They're grateful when I can keep prescription costs down.

Regroton®

chlorthalidone 50 mg, reserpine 0.25 mg.

1 tablet daily brings pressure down

Advantage: Both components of Regroton are long-acting.
Average dosage: One tablet daily with breakfast.
Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.
Warning: Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs. With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.
Side effects: Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.
For full details, see the complete prescribing information.
Availability: Bottles of 100 and 1000 tablets.

Geigy

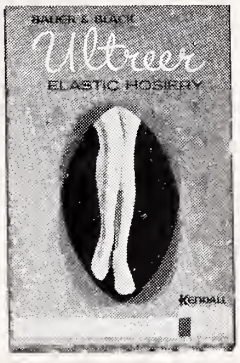
If you can't alarm her into wearing elastic stockings...

charm her with Ultreer™

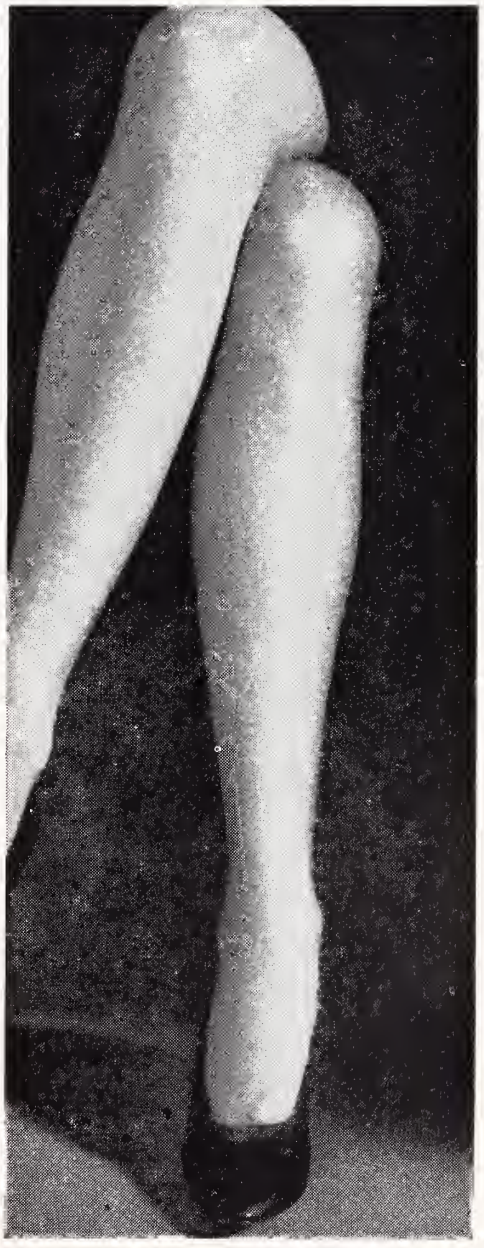
You see, a woman simply has no defense against Ultreer Elastic Stockings. They look like lovely support stockings. They feel like lovely support stockings. They're that sheer, and shapely and comfortable.

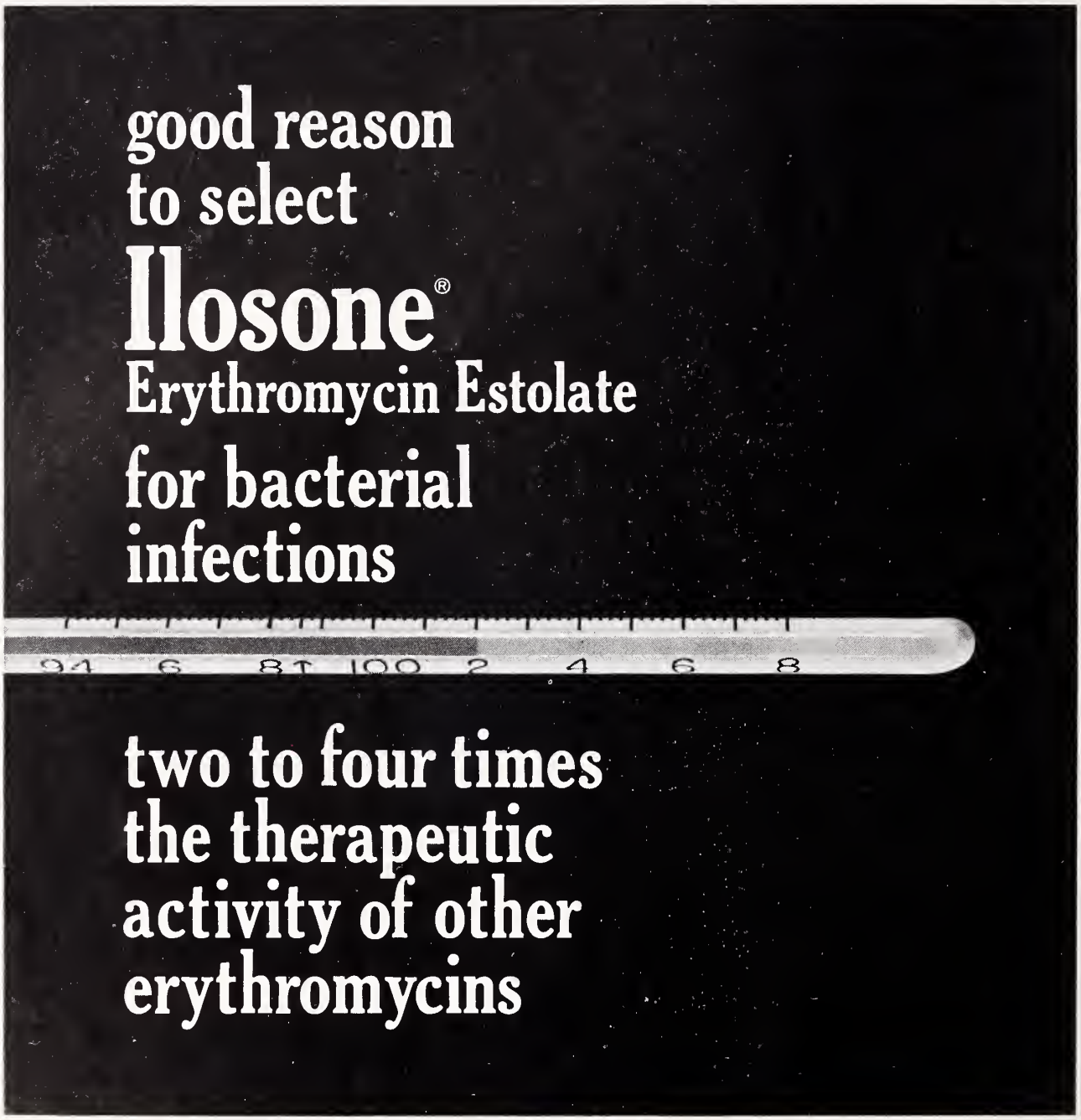
But that's where the similarities end. New Ultreer fits firmly and evenly over the entire leg. Gives true therapeutic compression necessary to relieve varicose veins and other leg disorders. Each pair provides the therapy you prescribe. And at such a low price, a woman can afford two pairs of Ultreer as easily as she can afford one pair of ordinary elastic hosiery.

Ultreer. What a stocking.



KENDALL
BAUER & BLACK SUPPORTS DIVISION





CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

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Building for the Future

MILFORD O. ROUSE, M.D.
Dallas, Texas

EVERY TIME I attend the dedication of a new building, I remember the words of poet Edwin Markham:

We are all blind until we see
that in the human plan,
Nothing is worth the making
if it does not make the man.

Why build these cities glorious
if man unbuilded goes?
In vain we build the world
unless the builder also grows.

What he said about the building of cities applies equally well to the erection of this beautiful, commodious new Headquarters Building of the Iowa Medical Society.

As a structure of steel and masonry and glass, this building makes a favorable impression. As an addition to this street in West Des Moines, it has a certain amount of value.

But if that's all it is, what a tremendous waste of time and money to have built it.

This building, like the glorious cities in the poem, serves a worthwhile purpose mainly because it symbolizes a worthwhile contribution to mankind. It was not built in vain because it represents the growth of the builders. The ideals, the devotion to the welfare of man that will flow from this building to the physicians and to the people of Iowa give it the real value which makes this dedication such a significant event.

This Headquarters Building represents not only an improvement in the physical environment of the Iowa Medical Society, but also a reaffirmation of this Society's adherence to the principals for which it exists—the betterment of the health of the people of this great state.

Our purpose in gathering here, therefore, is to dedicate this building—not just to the Society whose offices are housed here, but to the people of Iowa, to the service of whom this Society's efforts are dedicated.

It is safe to assume that as you continue to build for the future of the Iowa Medical Society, you will want to build your organization so that it will be as strong as this building. To help you do that, at least as I see it, I would like to offer four building blocks which you can utilize in the foundation of your Society in the years ahead.

The first is *confidence* in ourselves.

In a few recent years, and particularly in the last year, many of us who are physicians or who are a part of the medical profession's organizations, have been tempted to have negative thoughts about the profession which we serve. We have heard criticism, and some have begun to believe it. We have seen a loss in the matter of national health legislation, and some few have begun to feel defeated. Fortunately, these feelings have not been too widespread through functioning medicine. But they are prevalent enough to be of some significance in the over-all thinking of medical organizations.

I would like to see a reversal of such thinking.

Nothing has happened that makes a physician any less of a physician. Nothing has happened which makes the county, the state or the national associations of organized or functioning medicine any less than they were in previous years.

I want to see us stop worrying about what some consider losses, and stop listening with such a sensitive ear to criticism from people who are not even a part of our profession. I want to see us accentuate the positive again. Let us not look back in anger or frustration, but around us with awareness and forward with sober, practical, determined optimism.

For a long time, this country has had medical service and health care for all of its citizens which has been the envy of the whole world. That is something to be proud of. Let's be proud of it. Let's talk about it. Let's emphasize it. And let's ignore the people who are standing on the sidelines searching diligently for some small weakness and then expanding it all of out of proportion for their own sensational purposes.

Let's have confidence in ourselves, because we merit it.

The second foundation stone is to *continue to build*, or, if necessary, to rebuild the confidence of the public in our profession.

People outside of the profession who are our patients also hear and read the criticism. They may tend to believe it, because of the natural tendency to believe anything printed, broadcast or telecast.

Let's concentrate our efforts on letting those people know that what a disgruntled outsider says doesn't affect the health care they receive. Let's make our patients realize that the main thing they should consider in regard to medical attention is the service they get from their own doctor. To do that successfully, of course, we're going to have to see to it that every citizen gets such good service from his doctor that he won't pay attention to any criticisms he may hear.

We've got to treat our patients so well, not only medically, but personally, that every time one of them hears or reads a criticism he will say to himself, "That might be true of some doctors, but it sure isn't true of mine."

Let's rebuild the warm, personal confidence in doctors that people used to have in what they consider *the good old days.* Medical practice is much more effective today than it was then. Let's see if we can't rebuild and maintain the same kind of relationship with our patients. Let's see to it that every patient of ours remains a human being; not an IBM card in our patient records.

The third foundation stone is *participation in our medical societies.* The physicians of Iowa have made a wonderful record of faithful service and achievement, but there is room for even more diligent participation by doctors in their county and state societies, and in their American Medical Association.

I know of no organization that has ever existed in which *every* member was active and enthusiastic about the aims, objectives and activities of the association. But I would like to see functioning medicine come closer to that goal than anybody else ever has.

We need the strength, as a profession, that we can gain only through the unity of activity possible through our societies. The American Medical Association, to be the voice of all of organized medicine, must genuinely represent all functioning medicine, which means, in turn, it has to have the support and participation as well as the membership of physicians throughout our country.

The fourth and final foundation stone I want to mention today is faithful *participation* by the members of county medical societies in the *activities of their community.*

As doctors, we live and work with patients, with people, on a personal and intimate basis. But as a society—at the local, state or national level—I fear we too often remain aloof, concentrating on our members and science rather than our communities and nation.

I would like to see every local or county society become the medical consultant and advisor to the people and to the government of its political jurisdiction—including the schools and welfare organizations as well as the private clubs and associations to which people belong.

At the state level, I would like to see the same participation by state societies in the deliberations of the legislature and in the activities of the people and of their governmental agencies and organizations.

And at the national level, I hope the American Medical Association will continue to expand its advisory capacity with the Congress and the federal governmental agencies that are interested to one degree or another in matters of health and medical service.

One of these days, I hope to have the opportunity to expand on this subject of medical society participation in the community as a whole, but may I just leave these thoughts to challenge you today. I bring the congratulations and good wishes of the others of the 212,000 members of the American Medical Association.

I congratulate the Iowa Medical Society on the occasion of dedicating this beautiful new building. I know that it symbolizes the strength and growth of this society for the years to come. And I know also that all of the people of Iowa will benefit from that strength and growth. May we participate often and deeply of the tonic of dedicated service and diligent work.

Nurses' Institute on High-Risk Mother and Child

November 8-9, Memorial Union, Iowa City

Tuesday

9:00 a.m. INTRODUCTION TO THE HIGH-RISK MOTHER AND CHILD
Obstetrical Aspects—Charles A. White, M.D., and Anna E. Overland, R.N.
Pediatric Aspects—George L. Baker, M.D., and Virginia A. McLeran, R.N.

12:30 p.m. LUNCHEON

2:00 p.m. COMMUNITY ASPECTS
Maternal and Child Health—Lowell R. Hughes, M.D.
Extended Services—John C. MacQueen, M.D.

3:45 p.m. NURSING FOLLOWUP—Leone B. Johnson, R.N., and Constance A. Dunbar, R.N.

Wednesday

9:00 a.m. THE INFANT
Observations on the Normal Infant—Gerald Solomons, M.D.
Observations on the Suspect Infant—Una Haynes, R.N., associate director, Services Section, United Cerebral Palsy Association, Inc., New York City

12:30 p.m. LUNCHEON
"Nursing Needs of Infants With Cerebral Palsy or Related Neurologic Disorders" —Miss Haynes

Registration fees, including luncheon tickets, are $15 for physicians and $10 for nurses. The program has been accredited for five hours by the American Academy of General Practice.

Growth and Progress

SAMUEL P. LEINBACH, M.D.
Belmond

THERE IS A SYMBOLIC BEAUTY in the architectural design of the building we dedicate today. Brought together in tangible form are the qualities which medicine has gathered since antiquity. From its over-all beauty we are made aware of the devotion maintained and cherished by a profession whose purpose is to alleviate the afflictions of man. It is said, *Architecture is a handmaid of devotion.*

The plain but powerful lines of this building denote forthrightness and strength, so important in protecting and enhancing the effectiveness of medical practice. Always medicine has sought to perpetuate the good it can do. The pleasant arrangements within the building, so excellently designed for function, provide an environment conducive to achievement. The true soul of the building comes from the contributions of those who in the past have contributed to the attainments of the present, for those of the future to further glorify. Thus, this building then is a tribute to those who have gone before, a challenge to us who live to meet adequately the problems of today in order that we can provide those of tomorrow with goals that are in keeping with the highest traditions of medicine.

The artists who have caught the *Spirit of Medicine* in designing this edifice are the architects, Mr. Gerry Griffith and Mr. Ken Kendall. To them the satisfactions should be lasting. Credit is due to the IMS Building Committee composed of Dr. Cecil Seibert, Chairman, Dr. George Scanlon, Dr. John Sunderbruch, Dr. Dwight Wirtz and Dr. John Gustafson. Dr. Gustafson and Dr. Wirtz were called upon to serve as "on site" inspectors, and their suggestions and recommendations were invaluable. The members of the Building Committee had the great capacity to envision from blueprints what the finished building would be. How well they chose in making the many decisions that go into the creation of such a structure.

BIRTH OF THE IMS

Birth of the Iowa Medical Society is described in the book ONE HUNDRED YEARS OF IOWA MEDICINE, which was published in 1950. I quote from this source, "When the 25 Iowa practitioners of Medicine met at Burlington, Iowa, in June, 1850, for the purpose of organizing a State Medical Society, it was in response to a firm belief in the minds of a few broad-minded physicians, with a view to the future, that organized medicine was the only means of progress, and toward higher educational standards, with greater benefits to the State and the people generally." These goals have never changed.

One can but highlight a few of the events and persons in our past history. Many great medical leaders emerged with each new generation. These men made an impact on the past which is apparent yet today. In 1912, a space was rented for a central office (where is not related) and one stenographer was hired. In 1924, Dr. Tom B. Throckmorton, father of our Dr. Tom Throckmorton, and our legal counsel, Robert Throckmorton, became secretary of the State Society. The office was moved to quarters in the Bankers Trust Building and remained there until 1952. It is interesting to note that our Executive Vice-President, Donald L. Taylor, came to the Society to assume the newly created position of Field Secretary in February, 1948.

In 1952, in response to need for greater space, the Iowa Medical Society moved its headquarters to a modern new structure at 529 Thirty-sixth Street in Des Moines. During our 14-year stay on Thirty-sixth Street the Society experienced a phenomenal growth. Several employees were added to our staff, and on one occasion extensive remodeling of the building was accomplished in order to better serve our needs.

PLANNING BEGAN IN 1962

In 1962, after many months of careful evaluation and consideration, the IMS Board of Trustees was authorized by the House of Delegates to proceed with the preparation of plans for a new Headquarters Building. This action was based on the conclusion that the building on Thirty-sixth Street was much too small, and, if activities of the Medical Society were to be maintained, and actually increased, an expansion of our facilities would be necessary.

In 1963, the Medical Society purchased a three-acre tract of land, and it is on approximately one-half of this tract that our new building now stands. To give you an idea of our expansion we moved from an office of approximately 5,000 square feet to one which has approximately 13,000 square feet. In planning for the new building, the Board of Trustees and the Building Committee were especially concerned about an adequacy of meeting accommodations, storage space, and parking facilities, and opportunity for expansion. We believe these criteria have been met. Many men have devoted a great amount of personal attention to the building project. I remember that our first "serious" talks about a new building began in 1952 when Dr. Otto Glesne was president. I should like to pay tribute to Dr. Glesne—and to all the other past presidents who have had an active role in the development of our new Headquarters Building—

Dr. George Scanlon, Dr. Vern Edwards, Dr. Otis Wolfe and Dr. Frank Ober. We also owe a debt of gratitude to all members of the Board of Trustees who have served during the past five years; for their guidance and counsel, they deserve our admiration.

SCOPE OF THE PROGRAM

Sixty-six years ago, in 1900, the IMS had two designated committees—a Committee on Health Legislation and a Committee on Ethics. Today, 200 of our members serve on 48 active committees which are concerned with all phases of health and medical care. Twenty-five years ago our staff was kept busy administering only the work of the Medical Society, and its various committees. Today, we are actively involved in the administrative affairs of the Health Planning Council of Iowa, the Iowa Medical Foundation, the Iowa Interprofessional Association, the Military Dependents' Medical Care Program, and the Health Careers Council of Iowa. Ten years ago we had a staff of nine or 10 people. Today, we have 16 in our employ, and are seeking at least one additional staff member for the Field Service Division. Thus, the real growth and progress of the Iowa Medical Society has been during the past 25 years and much of it during the past 10 years.

During this time medical science has advanced more than in all preceding recorded history. The American society has become more complex and more complicated. Far reaching socio-economic problems and changes have occurred. However, most important to medicine, whose strength and effectiveness stem from the historic patient-physician relationship, has been the intervention of a paternalistic government into the field of health care. It is in response to all these factors that the Iowa Medical Society has grown. Throughout the years the objective has remained unchanged—to protect and enhance patient care. Thus we have the Iowa Medical Society in the year 1966.

Oliver Wendell Holmes wrote, *I find the great thing in this world is not so much where we stand, as in what direction we are moving.*

Between-Meal Snacks That "Spoil Appetites"?

Research on whether three large meals daily, with long intervals between them, are more healthful than frequent small meals has not yet changed the American meal pattern. However, continuing research continues to suggest that large meals, widely spaced, promote fat deposition and overweight. Provided only that between-meal snacks contribute to a well-balanced overall diet, they may benefit youngsters—especially adolescents.

An article in the May, 1966, issue of the AMERICAN JOURNAL OF CLINICAL NUTRITION* has reported on a recent one-year study of the effects of various frequencies of dietary intake on the body compositions of 226 children and adolescents in three boarding schools. The institutions served three, five and seven meals per day, respectively.

In the school that served three meals per day, there was a tendency among the older children (boys 11-16 years of age, and girls 10-16 years of age) to accumulate reserves of fat, than there was among youngsters of the same ages at the schools where five or seven meals were served each day, with smaller portions at any one time.

No significant differences could be found among the groups of younger children (boys 6-11 years of age, and girls 6-10 years of age), though they too received three, five and seven meals per day, respectively.

* Fabry, P.: Effect of meal frequency in school children. Am. J. Clin. Nutrition, May, 1966.

Eggleston Named IIA President-Elect

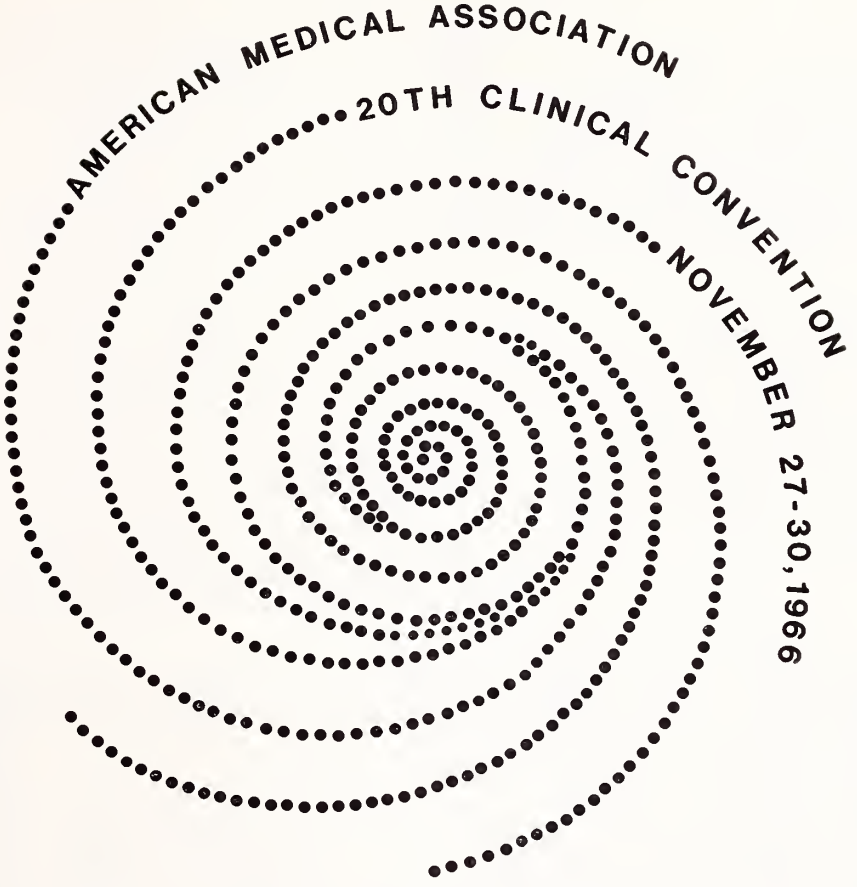
Max Eggleston, a Waverly, Iowa, pharmacist, was installed as president of the Iowa Interprofessional Association at the organization's annual meeting September 20 at the Headquarters Building of the Iowa Medical Society in West Des Moines.

Fernando Duran, R.N., of Clarinda, was chosen president-elect.

Other officers selected to serve for the coming year were Fred D. Wertman, D.V.M., vice-president; and Donald L. Taylor, secretary-treasurer.

At the annual meeting the IIA delegates voted to continue sponsoring a dinner for Iowa legislators and to continue participation in the Iowa State Fair "Hall of Health" project.

The member organizations which comprise the IIA are the Iowa Medical Society, the Iowa Dental Association, the Iowa Pharmaceutical Association, the Veterinary Medical Association, the Iowa Nurses Association and the Iowa Hospital Association.



AMA '66
LAS VEGAS

Convention site "extraordinaire" that's Las Vegas. America's entertainment capital becomes the classroom for America's practicing physicians—offering you a comprehensive, compact, postgraduate course in recent developments in medical science. A magnificent Convention Center, fine hotels and motels, excellent restaurants plus star studded entertainment await you and your family.

The AMA's first clinical convention in Las Vegas offers a top notch scientific postgraduate program.

Scientific sessions will be held on the following topics: Scintillation Scanning • Radiation and Cancer • Clinical Pulmonary Physiology • Gastroenterology • Futuristic Diagnostic and Therapeutic Tools • Neck Pain • Antibiotics • Urology • Aerospace Medicine • Unconsciousness • Dermatology • Juvenile Diabetes • Endocrine and Metabolic Diseases • Pediatrics • Surgery • Hematology • Psychiatry • Otolaryngology.

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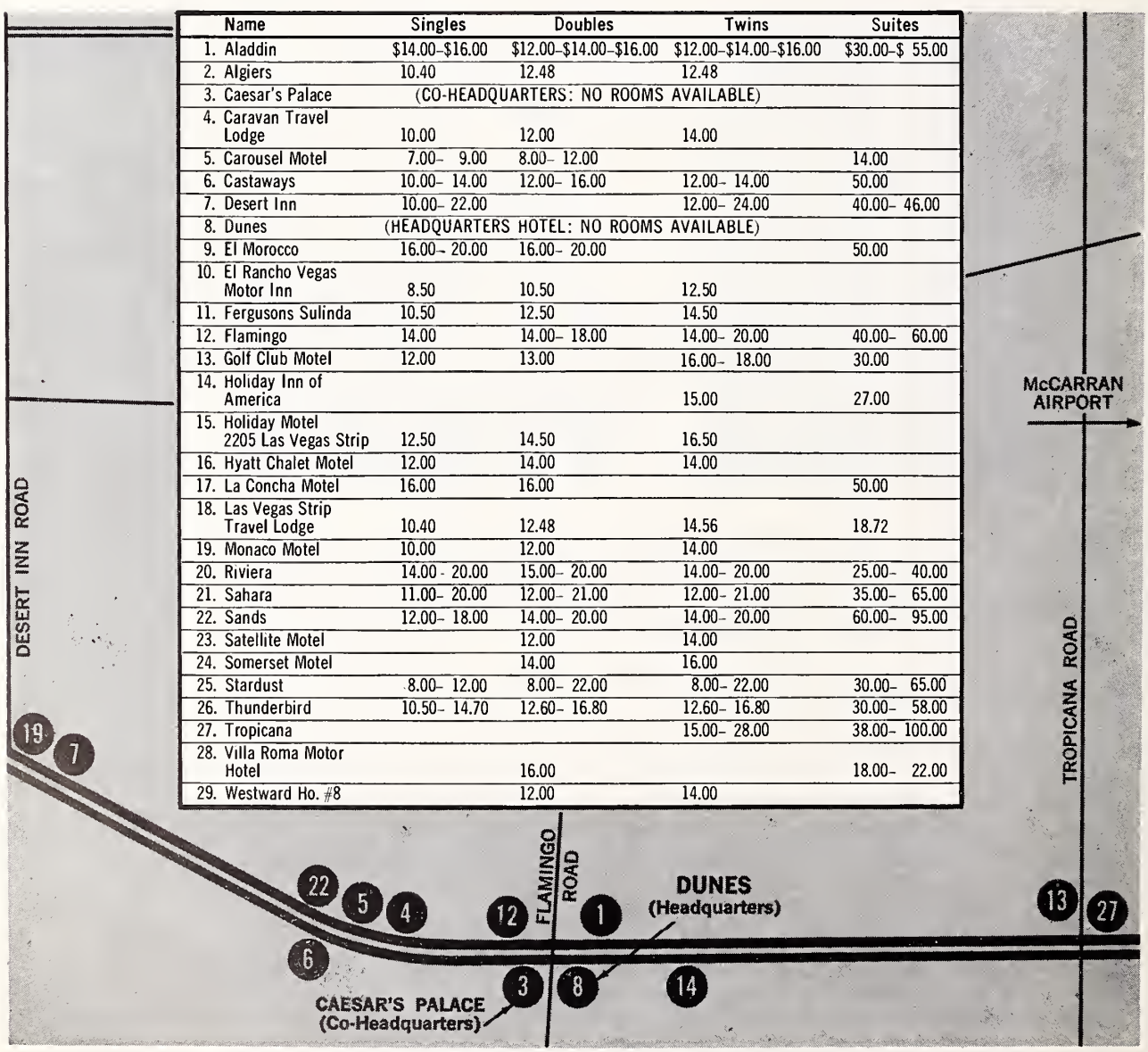

Scientific Articles

Office Orthopedics for the General Practitioner

JOHN H. MOE, M.D.
Minneapolis, Minnesota

THE "OFFICE" OF THE GENERALIST includes other areas than the one where his name is posted. The hospital out-patient area, the emergency room, and the hospital nursery are all places where he sees new patients and initiates treatment.

CONGENITAL DISLOCATION OF HIP

Because of its great importance to the future welfare of the child and because it falls so directly within the domain of the generalist, the obstetrician and the pediatrician, the diagnosis and early treatment of congenital dislocation of the hip deserves consideration first.

Although there has been some trend toward earlier diagnosis, a majority of children still are x-rayed for the first time when the child's limp or waddle first brings concern to the parents. By that time the opportunity for easy treatment, and treatment which offers almost a guarantee of subsequent normality is long past.

The hips are seldom dislocated at birth. We do not know why some children are born with hip-joint laxity, nor why the condition is most often confined to one hip joint, but this phenomenon does occur quite frequently, and it may result in a dislocation. It has been shown that in a majority of cases the relaxation is sufficient to permit manipulative movement of the cartilaginous head in and out of the acetabulum on the day of birth or on the day following, and that the lax joints tighten spontaneously, even during the first week, and become normal hips. Barlow, of Manchester, England, has shown that in well over 50 per cent of infants, unstable hips at birth become stable without treatment, since they are not dislocated at birth and become dislocated only by manipulation.

The diagnostic signs for dislocated or subluxated hips that are most frequently described consist of asymmetrical skin folds in the upper thigh, limitation of abduction, and femoral shortening as demonstrated by comparisons of the height, of the knees in flexion. These are *not* diagnostic in the newborn. Limitation of abduction is not present until the soft tissue structures tighten, usually after some months. Demonstrable difference in femoral length occurs only when there is complete dislocation, and this is seldom present at birth. Skin-fold asymmetry is variable in infants that have no hip-joint abnormality.

The test for instability at birth is commonly known as the Ortolani sign—a snapping of the hip as the head passes over the posterior acetabular rim. As originally described in 1936, it required placing the child on his or her back, with the flexed knees together, abducting the flexed hips, and noting the snap or jerk as the dislocated or subluxated hip passed into the acetabulum. It was described as a diagnostic test for the older infant and not as a good diagnostic test for the newborn, but when modified to include manipulative telescoping, it is highly diagnostic in hip-joint instability in the newborn and during the early months of postnatal life.

As modified by Barlow and others, the test consists of placing the infant supine on a firm surface with the knees and hips flexed; the examiner places the middle finger of each hand over the greater trochanter, and applies his thumb to the inner thigh over the region of the lesser trochanter. The thighs are brought into abduction, while the finger tips apply forward pressure against the greater trochanter. If the hip is dislocated, the femoral head is felt to slip over the posterior acetabular

Dr. Moe, Professor and Director of the Division of Orthopedic Surgery at the University of Minnesota Medical School, read this paper at the 1966 annual meeting of the IMS.

rim. If it is not dislocated, no snap is felt during this maneuver. The examiner thus continues the testing by reversing the forces, adducting the thighs while applying pressure with the thumbs against the inner thighs. If there is instability, the head will be felt to snap over the acetabular rim. In performing this portion of the test the examiner should use his other hand to hold the baby's pelvis firm. Telescoping the femur by pulling to the front and pushing to the back may give additional evidence of instability.

This test should be performed promptly but carefully on *every* newborn infant. It there is evidence of instability of one or both hips, x-rays should be taken. One should use the Von Rosen technic of abducting the lower extremities 45 degrees and carrying out maximal internal rotation while an antero-posterior x-ray is taken. Either the physician must be present while the x-ray is taken, or a specific technician must have been carefully instructed. Lead shields have no place in this x-ray technic. Subluxation or dislocation is shown if a line through the shaft of the femur points to the region of the anterior superior iliac spine, instead of to the center of the acetabulum.

The child should be reexamined within one week. In 50 per cent of babies the instability will no longer be present, but if the test and x-rays are still positive, treatment must be started immediately. Treatment at this time is very simple, consisting merely of placing the infant in a good abduction-external rotation splint, and keeping the hip in constant reduction position until the capsule tightens and the instability disappears.

The fetal position of the infant's lower extremities is that of flexion, abduction, and external rotation. The incidence of congenital dislocation is much higher among people who place their infants in carrying devices in which the lower extremities are held together in extension, and the incidence is low among people who carry their infants straddling on the mothers' backs. Treatment of dislocation and subluxation should therefore maintain flexion, abduction, and external rotation. The results are better when this reduction position is constantly maintained, than when the child is taken out of the splint for bathing and the legs are adducted and extended during bathing.

The Frejka splint is the most frequently used, but it is most effective if the mother is specifically instructed to maintain the position of flexion and abduction at all times during bathing. The Von Rosen splint is better, for it is rubber-covered and need not be removed for bathing. Barlow's splint is likewise effective.

Splinting in reduction must be continued until the hip is stable. When treatment has been started during the first postnatal week, complete and permanent stability can usually be achieved in three months, and no further treatment is usually required.

It is not wise to check periodically for instability during the first weeks of treatment. The hip should be kept reduced until it is completely stable.

In Malmo, Sweden, a city of 220,000 people, practically all babies are born in one hospital. A program of routine newborn hip examination and treatment has been expertly carried out there, under the direction of Von Rosen, with the result that congenital dislocation and dysplasia of the hip have not been found in later childhood. The same results have been attained in certain parts of England and in other areas where similar programs have been instituted. In the United States, we are lagging far behind in the immediate diagnosis and treatment of hip dislocation in the newborn, though in most of our centers orthopedic surgeons are trained to make an early diagnosis and to spread the information to generalists, obstetricians and pediatricians. It is not necessary for an orthopedic surgeon to see and examine every newborn child. The doctor who delivers the child should learn how to examine the hips and should call in consultative help if he is uncertain. The treatment of the newborn with abnormal hip laxity is simple, and the generalist can carry it out very adequately. It is far better to overtreat by instituting a harmless splinting than it is to neglect even the occasional hip which may dislocate permanently.

Much has been spoken and written concerning hip dysplasia as a precursor to subluxation and dislocation. It hasn't been established, however, whether dysplasia of the acetabulum, with its increased acetabular angle, is a precursor to subluxation and dislocation. The normal acetabular angle in the newborn is difficult to evaluate, for the true acetabulum is cartilaginous and cannot be truly visualized on x-ray. When the infant attains an age of several months, measurement of the acetabular angle becomes more realistic, and it may then be determined whether dysplasia of the acetabulum does or does not exist. Since it is advisable for everyone who examines infants to be knowledgable concerning the status of the hips of the newborn, it likewise becomes mandatory that he learn how to evaluate x-rays of the infant before and after the walking age begins. X-rays must be taken with the child's pelvis flat and the legs neutrally rotated. Another view should be taken in 45 degree bilateral abduction, in full internal rotation.

Lines should be drawn on the x-ray with a soft-leaded pencil, a wax pencil or with some opaque fluid that is removable. Ink and other permanent markings should never be used, for more frequently than not the initial markings are inaccurate. Unfortunately, roentgenologists are frequently guilty of such wrongdoing.

The y-line of Hilgrenreiner is a horizontal line which passes through the tri-radiate cartilages along their upper margins. Perkins' line is vertical and at right angles to the y-line, and it passes through the outer visible border of the superior acetabulum. The acetabular index is measured by

an oblique line which begins at the tri-radiate cartilage and extends to the superior outer visible acetabulum. Shenton's line follows the lower border of the pubic ramus, and in the normal hip becomes continuous with the lower border of the femoral neck in an unbroken arc.

Normally, the head of the femur should lie in the medial inferior quadrant of the intersecting lines of Hilgrenreiner and Perkins. Any displacement laterally or upward is abnormal. When the ossification center for the femoral head has not appeared, its location must be surmised, and measurements from the visible metaphysis to Hilgrenreiner's y-line give valuable aid. The acetabular index is normally under 30 degrees, and if higher it is probably indicative of acetabular dysplasia. If Shenton's line is broken, the hip is abnormal.

It is better to overtreat than to undertreat the congenitally unstable hip. The same treatment principles can be applied to unstable hips diagnosed after a month or two, or even up to a year, but the outcome becomes much more uncertain as the months pass. Older infants may require cast application under anesthesia, and may even require tenotomy of the tight adductors. An initial trial of splinting may be carried out in the first postnatal year, but if reduction and stability are not attained rapidly, consultative help should be sought from an orthopedic surgeon.

POSTURE PROBLEMS, ROUND BACK, AND SCOLIOSIS

Children are frequently brought to the office of the general practitioner because of their mothers' concern about their poor posture. There are a number of etiologic possibilities. Some of them are of minor or of passing concern, and some of them may lead to severe problems of deformity.

It is in girls, during the very early adolescent years, that the problem most frequently arises, for at that age parents seldom see their daughters unclothed. It is very common for a set of distraught parents to bring in their 12-year-old daughter with a lateral curvature of rather severe angulation that they noticed only a week earlier. All too often they tell of the girl's visit to their family doctor, their pediatrician or to their school physician just a short time before, during which no deformity was noted. The curvature has, of course, been present for a long time, but only recently has begun showing the rapid progression which makes its presence obvious. It is this unpredictable increase in deformity which makes the early diagnosis of idiopathic scoliosis so very important. As in congenital dislocation of the hip, early treatment is very much easier and more productive of a good result.

A standing x-ray should be taken of every child who shows evidence of a lateral spinal curvature. Only an antero-posterior view may be necessary but if the child also shows evidence of postural round-back deformity, a lateral standing view should be included. The x-ray films should always be the largest available; 14 by 17 should be standard, and the entire spine should be included.

The x-ray technician must be fully aware of the curvatures which can be produced by unequal weight distribution or a difference in leg length, and before any x-rays are taken, the examining physician must take careful leg measurements.

When a particular 12-year-old girl was sent to me for evaluation of her slight curvature, I felt that the immediate use of the Milwaukee Brace was not indicated, for the curve was of small angulation and was completely flexible. I informed the referring physician that another standing x-ray must be taken in three months' time. He sent it to me in about five months, and it did show a rather marked increase in the curvature. I called him by long distance, expressed concern over the progression and told him to send the child down at once for a Milwaukee Brace. When the child appeared, I found that there was no real evidence of progression on clinical examination, and ordered another standing x-ray. It showed that there had been no increase in the degree of curvature. Further observation without bracing was therefore indicated. One must be aware of the fact that sometimes, in cases of flexible spine, a standing x-ray may represent only one frame of a motion picture.

One should never omit a back examination when a child has been brought in for other reasons. The first and most obvious essential is to remove all clothing. Leg-length measurements should be routine. One then should view the child from the back and should drop a plumb line from the prominent 7th cervical spinous process, and should note its deviation from the gluteal cleft. Though this technic may reveal no list, we sometimes note an asymmetry of the base of the neck and a prominence of the right shoulder and scapula. In one instance, the right shoulder drooped slightly. The rib prominence on the right side was not noticeable to any great degree until the patient bent forward, but then it became obvious and actually was an elevation of about two centimeters. The girl also showed a little asymmetry of the neck line along the trapezius border because there was a high curve to the left in the upper thoracic spine. That girl underwent surgical correction of a severe curve, and really represents a good result, but she still shows the things one looks for in examining the back for a curvature.

The general practitioner cannot undertake treatment of scoliosis in all of its complicated forms, but he should learn to recognize idiopathic scoliosis in its early stages. It would be very helpful for him to learn how curves are measured by the Cobb method, and how to direct the x-ray technician to take good standing views and supine side-bending films. He should know that very small, flexible curves can be safely watched for evidence of increase and loss of flexibility, and that in the growing child curves of greater magnitude, which show structural qualities must have treatment

at once with the Milwaukee Brace, if non-operative management is to be successful.

We have ample proof that in most curves in growing children, non-operative treatment by means of the Milwaukee Brace produces excellent correction. I shall review only one example. Alice was 12 years and two months of age when she was first brought to me by her mother. She had a curvature which was producing deformity, and there was good reason for her mother's concern, since she herself had such a curve. It had begun during her adolescence, was never treated, and gave her an ugly deformity that was continuing to give her a good deal of back pain. Alice accepted the Milwaukee Brace and wore it with good spirit and cooperation. That was in 1959, and the brace has been improved since then, but it was an effective brace at that time and is even more effective now. She wore it for two years, full-time. It was then gradually left off, a few hours at a time, until correction was shown to be maintained without the brace. At the present time she has been completely out of the brace for over three years, and has maintained nearly all of the best correction. Her appearance is excellent, and there is little external evidence of a curvature.

Postural roundback problems may make their appearance during early childhood. They may or may not lead, in adolescence to structural changes of epiphyseal growth disturbances. A little 4½-year-old girl was treated in a corset, and her deformity grew worse. When she had reached the age of 7½ years, a lateral standing x-ray showed a definite progression of the roundback deformity. There was still no evidence that a structural deformity was developing in the vertebral bodies, but we thought the deformity severe enough to deserve treatment. She was placed in a Milwaukee Brace with a posterior pad over the thoracic kyphosis and an anterior pressure pad over the upper sternum. There was almost immediate improvement, and before many more months had passed she was able to maintain the improved posture without the brace. The improvement shown by a standing lateral x-ray was striking. Many patients with these posture problems have or develop very tight pectoral muscles which also respond to the brace treatment along with stretching exercises. There is also some evidence to substantiate the statement that postural roundback deformity may be a precursor to the development of the roundback of adolescence.

This deformity is also known as Scheuermann's osteochondrosis, and is characterized by invaginations of discs into the vertebral bodies and the production of anterior wedging of those bodies. If the condition is recognized early during growth, the whole process can be reversed and the deformity overcome through wearing a Milwaukee Brace. Few areas in the whole field of medicine can match the satisfaction that is felt by both physician and patient when a severe deformity responds to this type of treatment.

SUMMARY

In conclusion, I have attempted to point out the responsibilities which rest with physicians who see these deformities in their earliest stages. Early diagnosis and early treatment are so very important! Delay in diagnosis and procrastination in starting effective treatment can lead to unnecessary surgery, and may lead to disaster.

The Treatment of Distal Radial Fractures

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Iowa City

IN 1814 ABRAHAM COLLES described a fracture of the distal portion of the radius with which his name has since been associated. Considerable confusion has been occasioned by the use of the eponym "Colles Fracture." It is perhaps preferable to speak of distal radial fractures, and to evaluate them according to the direction of displacement and amount of fragmentation present. The usual fracture of the distal radius occurs in an adult, presents one or two major distal fragments, is dorsally and radially angulated, and is somewhat radially displaced. Variations include the so-called Smith fracture, in which the distal fragment angulates volarward rather than dorsally, and other fractures in which there is marked fragmentation with shortening of the radius. These variations are uncommon and may require special treatment modalities, which will be discussed later.

The typical distal radial fracture is seldom seen in children. Rather, children have a propensity to develop a dislocation through the distal radial epiphysis, fractures of the shafts of the forearm bones, or a supracondylar humeral fracture. An adult, on the other hand, may have various injuries either instead of or in addition to a distal radial fracture. A fall on the outstretched hand in

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an adult may result in any of the following: a distal radial fracture, a fracture of both bones of the forearm, a humeral-shaft fracture or a navicular fracture.

Prior to embarking upon treatment of a distal radial fracture, one must have a clear view of the objectives of therapy. Restoration of 15° of volarward angulation and 30° of ulnarward angulation of the distal radial articular surface and restoration of the length of the radius have been the criteria for successful treatment of this fracture. These goals are seldom achieved, and are useless in themselves if the functional restoration of the extremity is not accomplished. A preferable goal is the restoration of maximum useful function of the extremity in the shortest possible time. This is a clinical goal and not one to be determined by an isolated radiologic evaluation.

EXAMINATION

When the patient presents a history of falling on the out-stretched hand and with pain in the wrist, a glance will often reveal the typical silver-fork deformity, and the diagnosis will be obvious. Frequently, however, swelling will mask the deformity. Examination of the patient should include a check for the area of maximum tenderness, since marked sensitivity in the region of the anatomical snuff box will make one suspect that perhaps he is dealing with a navicular fracture either alone or in conjunction with other injuries. A sensory examination should be performed upon the hand, since median-nerve involvement, although rare, does occur. Motor function of the hand should also be checked for the purpose of detecting tendon injuries in the region of the fracture. Actually, when one considers the nearness of the neurovascular and the tendinous structures to the region of the fracture, it is surprising that these structures are not damaged more often in cases of distal radial fractures. Obviously, one should not test for false motion or crepitation, since these contribute little to the diagnosis, and looking for them causes marked discomfort. X-rays should be obtained in the lateral and anteroposterior projections, and should include the navicular bone. If there is a distal radial fracture, the question of a concomitant fracture of the navicular is not too important for the moment since the immobilization carried out for the distal radial fracture will suffice for the navicular fracture for as long as five weeks, and at that time standard navicular views may be taken to determine the presence or absence of a healing navicular fracture. However, if no distal radial fracture is found in the presence of a swollen, painful or tender wrist, it is mandatory to take views of the carpal bones in the anteroposterior, lateral and oblique positions so as to determine the presence or absence of a navicular fracture.

In evaluating the roentgenograms of the distal radius, one should note whether the distal radius is one fragment or is comminuted. One should note the degrees of dorsal or volar angulation, or radial drift of the distal radial fragment, and of pronation or supination deformity of the distal radial fragment. In addition, he should note whether or not there is fracture of the ulnar styloid.

TREATMENT

If one can make the diagnosis of a distal radial fracture with some certainty on the basis of physical examination, he should inject the fracture hematoma prior to obtaining roentgenograms, in order to lessen the period of discomfort for the patient. If the diagnosis is in question, x-rays should be taken, and injection of the fracture site should be carried out. The technic of injection of the fracture hematoma consists of advancing a No. 25 needle from the dorsum of the wrist approximately one inch proximal to the radiocarpal articulation, until it enters the fracture hematoma, as shown in Figure 1. This usually can be done with ease, since the fracture hematoma extends over a considerable area. Prior to injection of the anesthetic solution, one must make sure that the needle is against bone and that blood can be aspirated. In this manner, one can avoid an intravascular or subperiosteal injection. When the needle is against

Figure 1. Injection of the distal radial fracture hematoma from the dorsal approach. Blood must return on aspiration, and prior to injection of the anesthetic agent, the needle must be against bone.

bone and the hematoma can be freely aspirated, one should inject about 5 to 10 cc. of 2 per cent procaine with epinephrine. If the x-ray has revealed a fracture of the ulnar styloid, one must also inject the hematoma of this fracture, for although this fragment is not important as far as functional results are concerned, it does give rise to considerable pain for the patient during the reduction maneuvers. Following injection of the hematoma, and the resultant relief of pain, the physician must be on guard lest the patient further injure himself by placing stress immediately upon the injured extremity. It has been repeatedly observed that the pain is completely relieved following injection of the hematoma, and that the patient will attempt to use the injured extremity while getting up from the chair or examining table, since the protective pain sensation, which is present in all fractures, has been effectively removed.

Following injection of the hematoma, the patient is placed in the supine position, the arm is abducted 90°, the elbow is flexed 90° and the hand is suspended by three finger traps placed on the thumb and the index and middle fingers. A sling and spreader is placed over the upper arm and weighted with six pounds, as is shown in Figure 2. The placement of the finger traps on the thumb, index and middle finger tends to correct the radial angulation and the radial drift of the distal radial fragment while the fracture is distracted and reduced. The advantage of this arrangement over the usual traction and counter-traction applied by individuals is the production of a steady, continuous pull. After the patient has been in the weighted traction for five to ten minutes, the physician grasps the arm circumferentially with both hands, places both of his thumbs on the dorsum of the wrist, and exerts volarward pressure over the carpal bones. This pressure results in traction to the radial fragments through the radiocarpal ligaments, and reduces the fracture. Following reduction in this manner, he applies an unpadded dorsal splint which reaches from the metacarpophalangeal joints to a point below the elbow, and is held in place with a circumferential dressing of wet gauze. The proper dorsal splint will be approximately 18 inches long and three inches wide, and will consist of four to six sheets of plaster. A wet gauze is used, since it is more effective in molding the plaster to the extremity. One should use considerable care in molding the splint around the wrist. Extension well around the radial side will prevent re-displacement of the distal radial fragment in a radial direction. If the splint is too short distally, the distal portion of the dorsum of the hand will swell considerably. If the splint is too long distally, it will impede motion of the thumb and fingers. While the plaster is drying, the physician grasps the wrist circumferentially, with his thumbs on the dorsal side and the index fingers on the volar side of the carpus, in such a manner that the thumbs create a groove in the dorsal side of the plaster splint. Thus he forces the carpus down in a volar direction, and secondarily holds the distal radial fragment in position by tension on the ligaments between the distal radial fragment and the carpal bones. This maneuver is shown in Figure 3. Following the hardening of the plaster, one should check the range of pronation and supination, since the tendency in reducing the distal radial fracture is to pronate the distal radial fragment, and in consequence, late limitation of supination may occur. After the plaster has hardened, the wet gauze should be cut throughout its entire length, and a dry gauze applied. This is necessary for if the wet gauze were allowed to remain in place over the ensuing hours, the plaster dressing would become much too tight due to shrinkage.

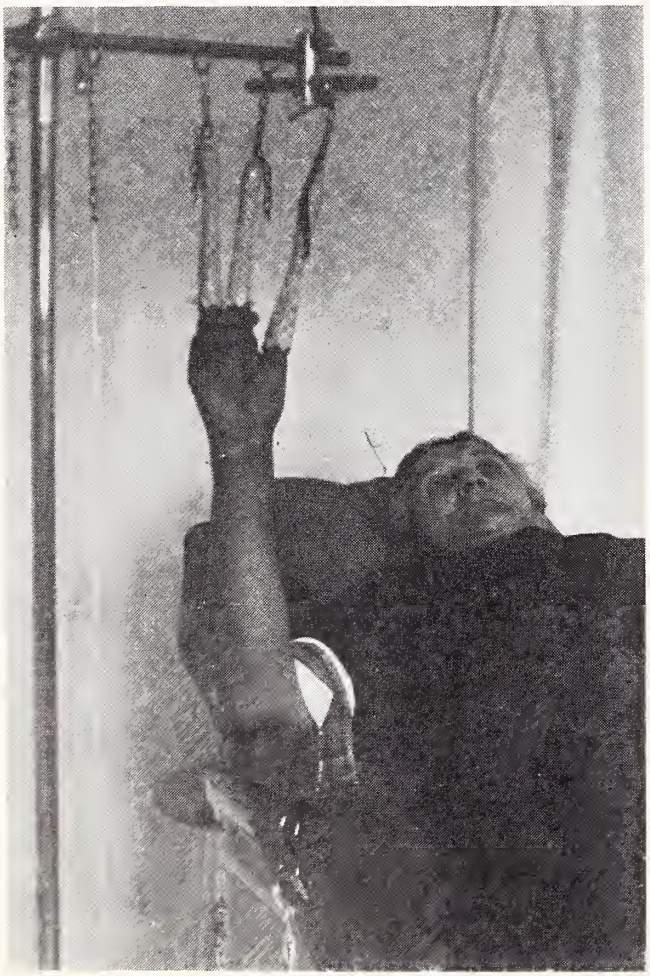


Figure 2. The patient positioned for reduction of a distal radial fracture. The fingers are held by finger traps, and six pounds of traction are placed on a sling across the upper arm.

After the dry gauze wrap has been applied, check x-rays are obtained in the AP and lateral projections. If satisfactory position is revealed, the patient is allowed to go home and is instructed to return in 24 hours, at which time the physician applies a plaster wrap which converts the plaster splint to a short-arm cast. If the check x-rays do not reveal a satisfactory reduction, the splint is removed, and a second reduction is attempted. One must exercise considerable judgment in determin-

Figure 3. The proper method of molding and indenting the plaster splint over the metacarpal bones.

ing the adequacy of reduction. It is often impossible to correct the dorsal angulation completely, and much less to restore the full 15° of volarward angulation. Experience has shown, however, that if the distal fragment is brought to neutral or to a few degrees of volarward angulation, a good functional result can be expected. One cannot allow himself the same latitude in restoring the length of the radius or in correcting the radial drift and radial angulation of the distal fragment, however. These deformities must be accurately reduced if a good end result is to be attained. It is of special importance to note whether the congruity of the distal radial ulnar articulation has been restored. Spreading this joint will result in considerable late disability.

Immediately after the application of the plaster cast, the patient should be instructed in carrying out a full range of active motion of the fingers, elbow and shoulder. For a good functional end result it is important for the physician to teach these exercises to the patient immediately, and for him to check them frequently to verify their adequacy. Perfect reduction and healing of a distal radial fracture is of no use to the patient if he has developed stiffness of the fingers, the elbow or the shoulder during the period of fracture healing.

After one week, the patient should again be placed in the finger traps, the cast removed, and x-rays obtained. If the position is satisfactory another short-arm cast is applied for an additional four weeks' time. In most cases, a new cast is required after one week because of a loosening of the original cast.

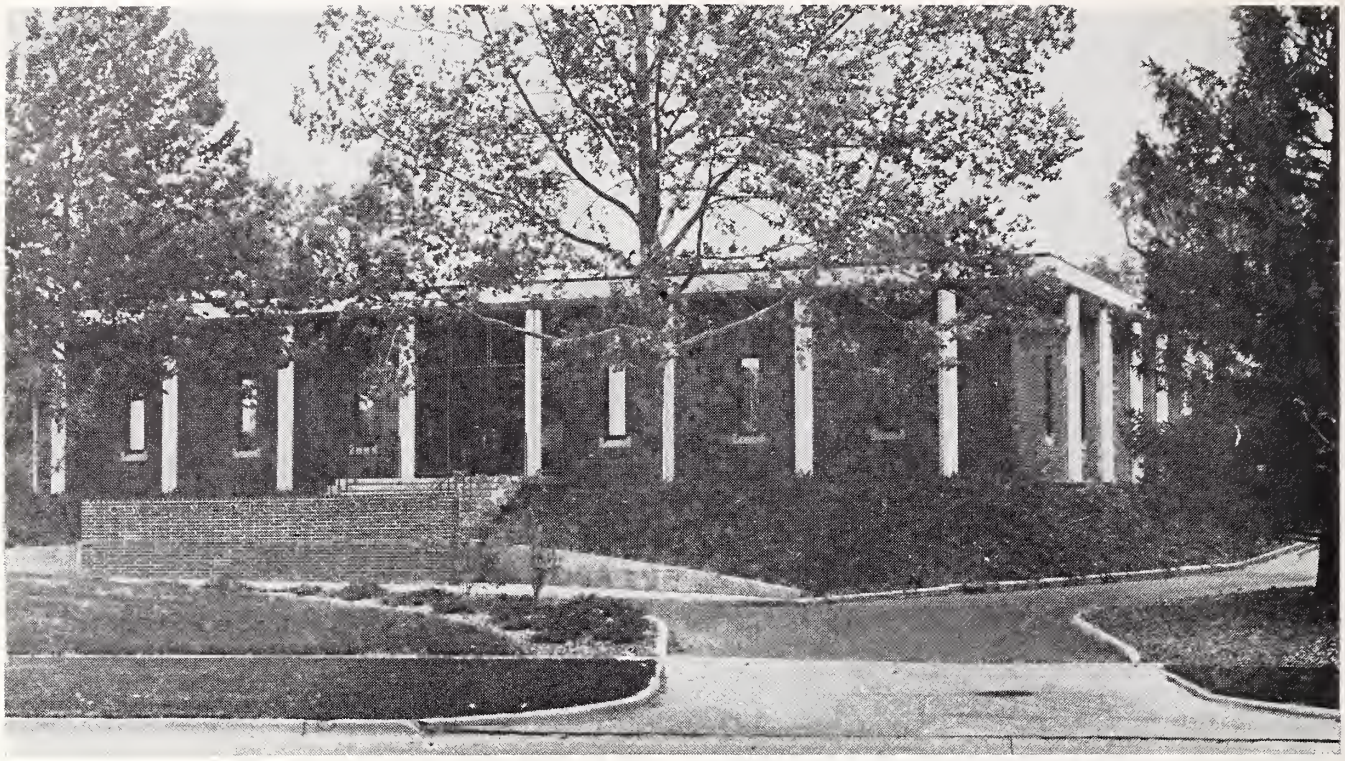
At the time of the conversion of the dorsal splint into a closed short-arm cast after 24 hours, and again at the cast change after one week, the physician must check carefully to make sure that the patient is carrying out a full range of active motion of the fingers, elbow, and shoulder. An arm sling should not be allowed at any time during the treatment. It serves no therapeutic purpose and it tends to discourage active use of the extremity.

In a few cases of severe comminution of the distal fragment, a long-arm cast may be necessary, but it certainly is not indicated in the usual distal fracture. Another means of obtaining traction and preventing radial shortening in complicated fractures is to flex the index finger over a splint, which in turn is incorporated into the cast. Another method that is sometimes helpful is percutaneous insertion of Kirschner wires through the distal radial fragment into the ulna to immobilize the distal radial fragment in a reduced position.

Following application of the cast, it is helpful to write with indelible pencil on the cast the date of the injury, the date of casting, and the date the cast is due to be removed, so that the physician can determine the chronological status of the fracture at a glance.

Immediately following removal of the cast, the patient should be instructed regarding active motion of the wrist joint. This should be the only joint immobilized by the casting, and an early restoration of the function of this joint must be carried out if a good functional end result is to be obtained. Slings and other supportive devices have no place in the treatment of distal radial fractures. They are not only useless but actually harmful in the treatment of these fractures.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.



On a warm, Indian summer Sunday, October 9 to be specific, a significant entry was made in the 116-year old annals of the Iowa Medical Society. Formally dedicated that afternoon, the Society's new Headquarters Building (above) welcomed more than 100 visitors. Among the participants in the Dedication Program were Dr. Samuel P. Leinbach (left below), president of the Iowa Medical Society; Dr. Milford O. Rouse (center below), of Dallas, Texas, president-elect of the American Medical Association; and Dr. Cecil W. Seibert, chairman of the Iowa Medical Society Board of Trustees. On the succeeding pages are the dedicatory remarks of Dr. Rouse and Dr. Leinbach.

Elbow Injuries in Children

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Fractures about the elbow in children differ from those seen in adults because the continuing growth potential of the involved areas relates directly to the ultimate result of treatment. Many minor defects of reduction will be corrected by the turnover of bone along lines of stress, but by the same token, irreparable damage to growing areas may further accentuate an initially insignificant deformity. Because of the difficulty in visualizing unmineralized epiphyseal centers and because of the problems connected with angulatory and rotatory malalignment, radiographs of both elbows in two planes are often necessary if one is to localize the anatomic site of fracture accurately in the youthful patient.

Pertinent to the following discussion is a review of elbow anatomy and the appearance of epiphyseal centers. The humerus, of the distal end which has a 20° forward tilt, terminates in the trochlea, medially located and somewhat hour-glass in shape, and in the capitulum, a spheroid structure located laterally. The former center does not appear until a child reaches 8-10 years of age, but the latter begins ossification at age two. The head of the radius, the epiphysis of which appears at six years, articulates with the capitulum and is joined to the ulna by the annular ligament. The concavity formed by the coronoid and olecranon processes of the ulna articulate with the trochlea through an arc of 140°. A capsule, with thickenings medially and laterally to serve as collateral ligaments, surrounds the components of the elbow joint. Outside the capsule and above the trochlea is the medial epicondyle, which appears when the child is seven years of age. The wrist flexors and forearm pronators originate from this structure, and the ulnar nerve passes posterior to it. Attached to the lateral epicondyle are the wrist extensors, deep beneath which the radial nerve is located. The lateral epicondyle may occasionally originate from a separate epiphysis that appears when the child reaches age 11. The capitulum and trochlea fuse shortly before puberty, and unite with the humeral shaft one or two years later.

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SUPRACONDYLAR FRACTURES

By far the most common fracture about the elbow in children is the supracondylar. It is found in 55-65 per cent of most series of elbow injuries in children to the age of 16. The average age range cited is between three and 10 years, and most cases fall in the five to 7½ year-old group. The typical mechanism of injury has been a fall on the hand with the elbow hyperextended. It has caused a break extending superiorly and posteriorly through the thin area of the humerus between the coronoid and olecranon fossa. The distal fragment is thus driven posteriorly and is somewhat supinated. Before marked swelling occurs, one can differentiate such an injury from a dislocation of the elbow by noting the posterior shift of the olecranon and the two epicondyles as a unit. Blount states that less than 1 per cent of supracondylar fractures occur when the elbow is flexed, and there is subsequent anterior displacement of the distal fragment. This is important, however, since the reduction and immobilzation is carried out in extension the reverse of the usual situation.

Massive swelling may be present in supracondylar fractures, even if seen soon after injury, and thus the safest and most predictable method of treatment includes traction, as will be described later. Only in minimally displaced or undisplaced fractures is manipulative reduction the treatment that poses least risk to the patient. If the patient presents with absence of the radial pulse, a try at manipulative reduction is indicated, since relief of the impingement by the proximal fragment upon the brachial artery will often be followed by a spontaneous decrease in edema as arterial spasm diminishes. Thus, a prereduction check for the presence of a radial pulse and capillary refill is always imperative, since continued absence may reflect continued arterial spasm, and loss of either one of them immediately after reduction indicates that the artery has been impinged upon during manipulation.

When one attempts manipulative reduction, counter traction by means of pulling a sheet across the upper chest towards the opposite shoulder is preferable to upper-arm counter traction, for it allows complete relaxation of the triceps and biceps tendons. General anesthesia provides adequate muscle relaxation and allows manipulation of the fracture fragments. Traction in the long axis of the forearm corrects overriding and eases the

proximal humerus back into its periosteal tube. The physician, at this point, can correct lateral displacement with his thumbs, and can ameliorate rotational malalignment by varying the amount of supination. Thumb pressure on the olecranon will force the distal fragment anteriorly, restoring the normal 20° forward angulation of the distal humerus. Only then should he flex the elbow past 90°, tightening the triceps tendon and locking the fracture fragments together. It is important to emphasize the necessity of correcting the rotatory and angulatory malalignment before flexing the elbow. Attempts after flexion are useless, for the fragment is compressed and held by the pull of the tensed triceps tendon. If the carrying angle has been restored, the flexed forearm is superimposed on the humeral shaft.

Once reduced, the arm is immobilized in flexion and supination by means of a collar and cuff or a posterior splint wrapped in gauze. Circular plaster dressings are *not* indicated, since marked swelling is usual, and room for tissue expansion must be present. Usually 10°-15° of flexion past a right angle is enough to hold the reduction. When the radial pulse is absent but where capillary refill is normal and there are no other signs of impending Volkmann's contracture, no alteration in the reduced position is neccessary. Close observation for 24 hours, preferably in the hospital, is obviously a necessity. After three or four weeks, the plaster can be removed and a sling used for a week. Subsequently, normal activity can be resumed on an *ad lib* basis.

When displacement or marked initial swelling is present, when signs of ischemia prevent enough flexion to maintain manipulative reduction, or when instability is noted after manipulative reduction, traction becomes the treatment of choice. Either skin traction by means of moleskin adhesive along the forearm or a threaded 3/32-inch Steinman pin through the olecranon 1 inch from its tip can be used to obtain reduction, then one can apply Dunlop's traction or one of its several modifications. When a pin is used, one should pass it from medial to lateral, with the elbow in extension to avoid inadvertently impinging the ulnar nerve. Depending on the size of the child, four to seven pounds on the forearm and one to three pounds as a counterweight on the arm will effect reduction in 12-24 hours. Several check films should be taken early, to evaluate progress. While in Dunlop's traction, the position of the patient's arm in relation to his body may be either horizontal in abduction or vertical with the elbow flexed over the face. Either position has its advantages and advocates, and the comfort of the patient and the preference of the physician can be the major determinants.

Traction is essential in the face of ischemia, but many feel that it should be routine in any moderately to severely displaced supracondylar fracture so as to achieve restoration of the carrying angle. Check radiographs taken through plaster with the elbow flexed are difficult to interpret, and also the arm position when films are taken markedly changes the visualized angulation of the distal fragment. Routine usage of traction in displaced supracondylar fractures allows better evaluation of fragment alignment both visually and radiographically. Comparison between the fractured arm and the opposite arm held in a similar position is often helpful in evaluating the correctness of position. Attenborough[13] has pointed out that although posterior or lateral displacement may initially produce blocks to elbow motion, bone remodeling tends to alleviate the problem. Full extension is possible within a few months, and anterior spurs that are blocking flexion, although slower to resolve, do decrease in size.

Cubitus varus, the incidence of which is as high as 57 per cent in some series and is around 30 per cent on the average—has been thought secondary to persistent medial displacement and internal rotation of the distal fragment. Smith,[4] Fahey[2] and others have shown clinically and experimentally, however, that medial or lateral tilts or angulations of distal fragments are the actual causes of post-fracture varus or valgus deformities. Angulation follows, if a compression force is added to the distal fragment when medial or lateral displacement is present, since no proximal cortex abuts the distal fragment on the side of displacement. This is seen when manipulation is followed by immobilization in flexion. Traction in the face of displacement prevents angulation, since compression and the resultant tilt is avoided. After 10-14 days the fracture is sticky enough to allow plaster immobilization in 70-80° of flexion for another two weeks without danger that the reduction will be lost.

Although traction reduces the possibilities of malunion and deformity, Staples[8] has emphasized the necessity of close surveillance during its use. Loss of pulse and paralysis were noted when excess traction was maintained after muscle spasm had diminished during the second 24 hours of treatment. Thus, reduction of the fracture during the first 24 hours is neither necessary nor indicated. Changes in the entering position of flexion when traction was applied also led to pulse obliteration and necessitated immediate surgical exploration. One should remember the dictum that a well reduced supracondylar fracture requires little more than aspirin for relief of pain when he evaluates possibly impending complications.

Volkmann's ischemic contracture, described originally in 1881,[9] remains the most serious complication of supracondylar fracture today, and occurs most frequently in children. The humeral condyles are snapped backwards during the fracture, the periosteum is stripped from the posterior surface of the proximal fragment, and the space fills with blood. At the same time the proximal fragment is

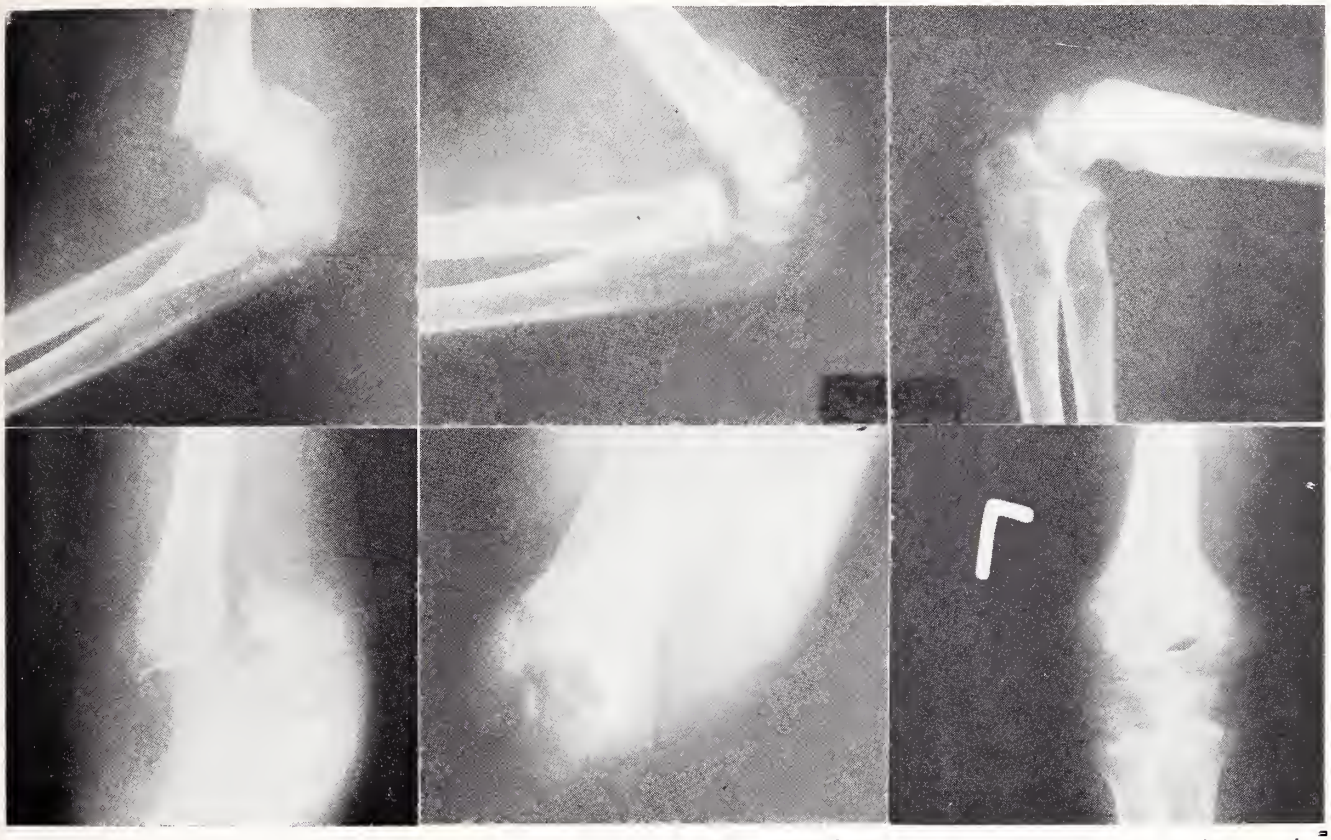

Figure 1. 1. MSC. Supracondylar fracture, left humerus with minimal posterior displacement. 2. MSC. After manipulative reduction under general anesthesia the position is excellent. The flexed forearm is superimposed on the humerus, indicating the carrying angle has been restored. 3. Two months after injury, x-rays reveal healing in an anatomic position.

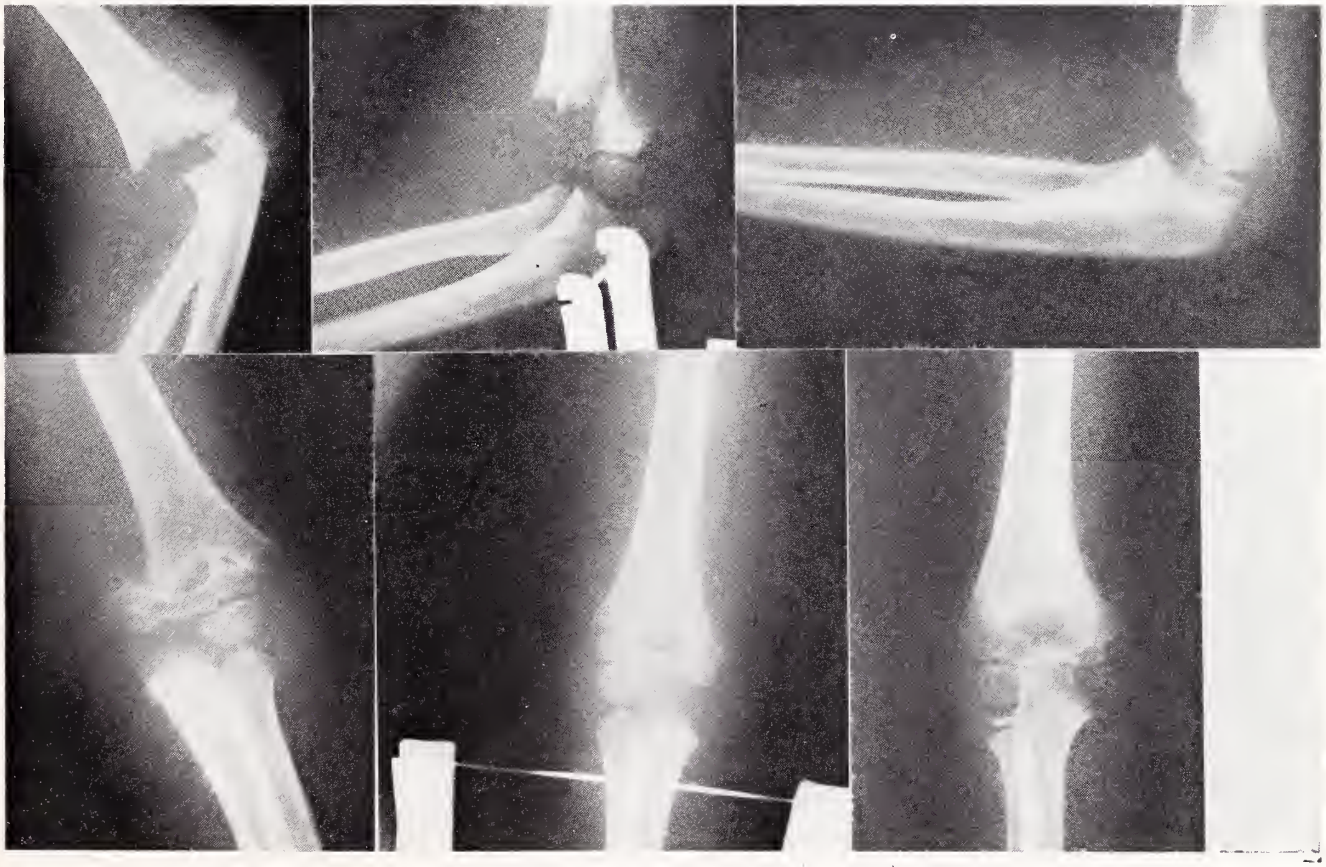

Figure 2. 1. SC. Supracondylar fracture, left humerus, with moderate displacement. 2. SC. Progress films taken during reduction with Dunlop's traction. Posterior displacement of the proximal fragment has not yet been corrected. 3. SC. One year post fracture bony remodeling is progressing and a function is normal.

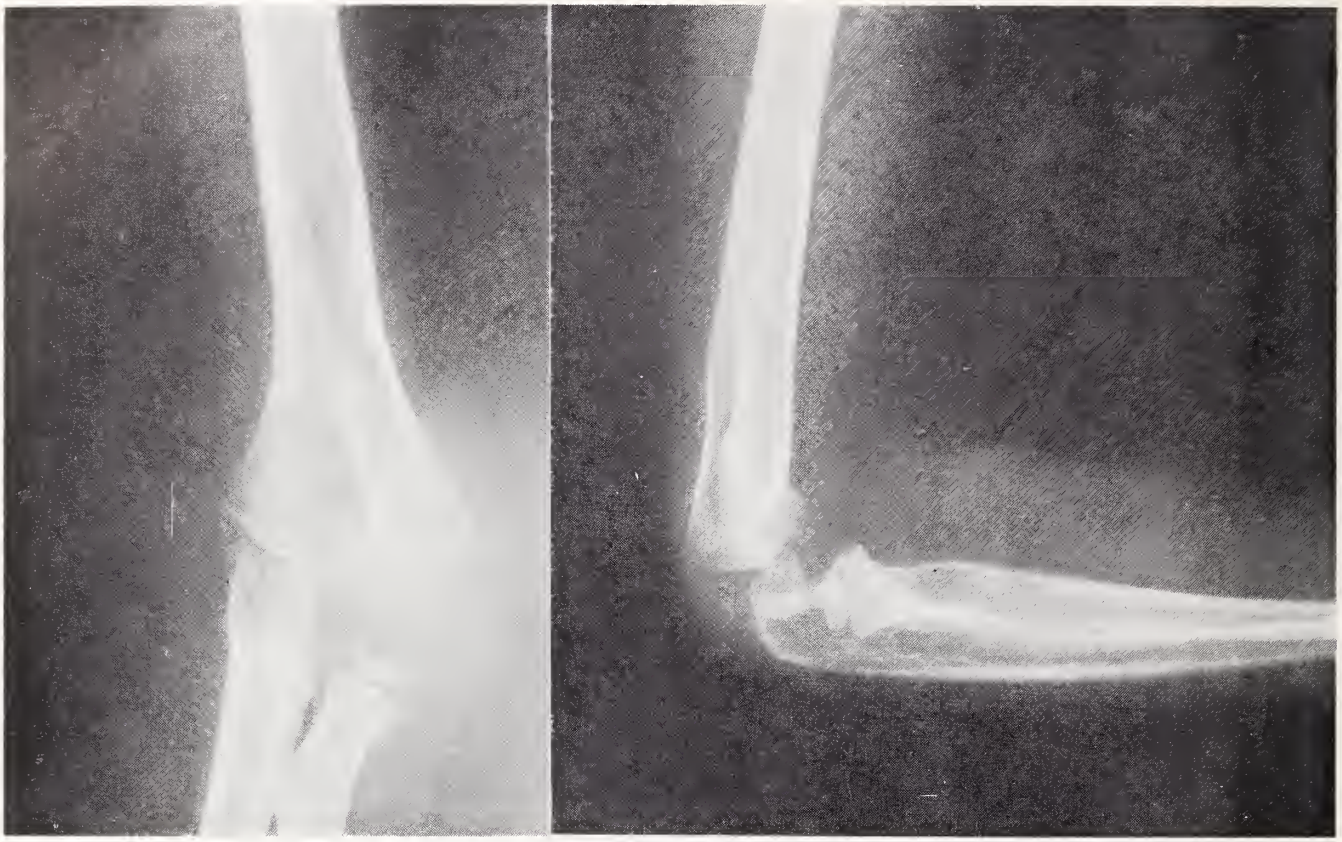

Figure 3. Malunion of a right supracondylar fracture illustrating loss of the normal carrying angle or cubitus varus. A painful, weak elbow which is also cosmetically unacceptable may be expected.

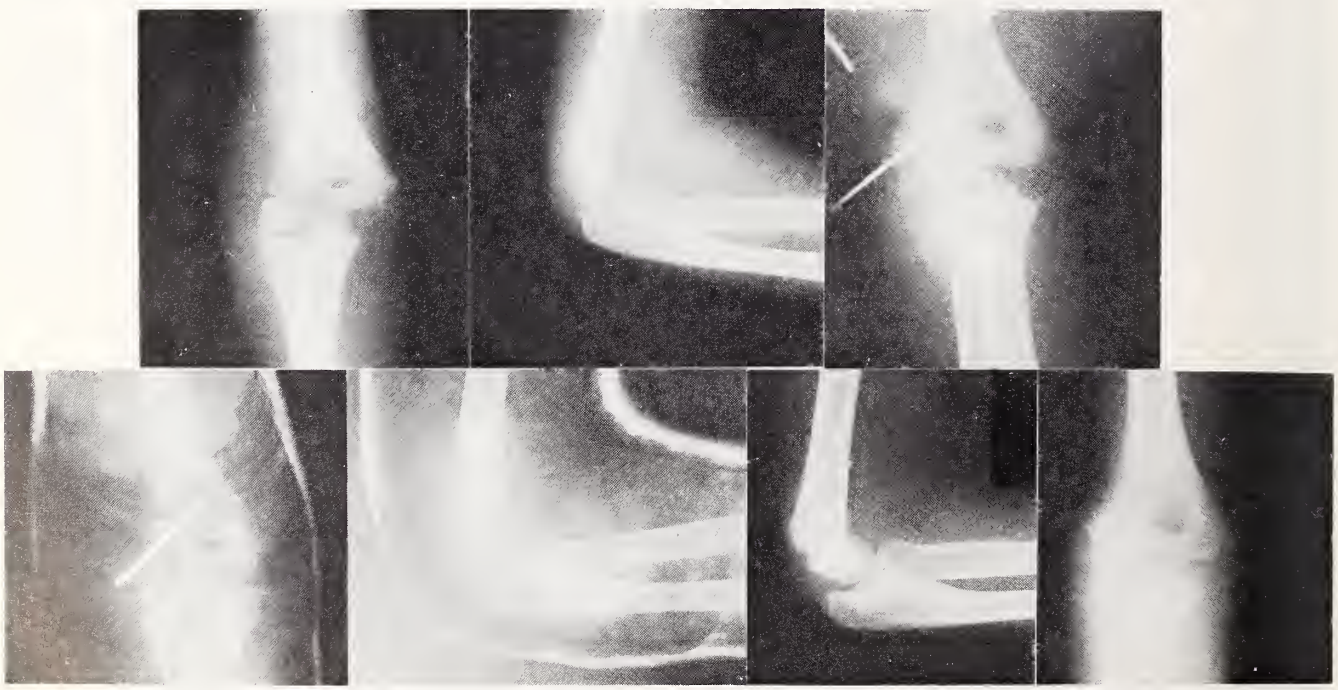

Figure 4. 1. L. Fracture of the lateral condyle of the left humerus. Relatively little rotation of the capitular fragment is present. 2. L. Operative film illustrating a Kirschner wire through the metaphyseal flake accompanying the capitulum. 3. L. (A&B) The extremity is immobilized for four weeks in plaster with the elbow as 90°. 4. L. Ten weeks post injury, the fracture has united and a full range of motion at the elbow is present.

Figure 5. Fracture of the lateral condyle treated non operatively, resulting in cubitus valgus with late ulnar palsy.

Figure 7. Unstable fracture of the radial neck post reduction requiring a Kirschner wire through the capitulum for stabilization.

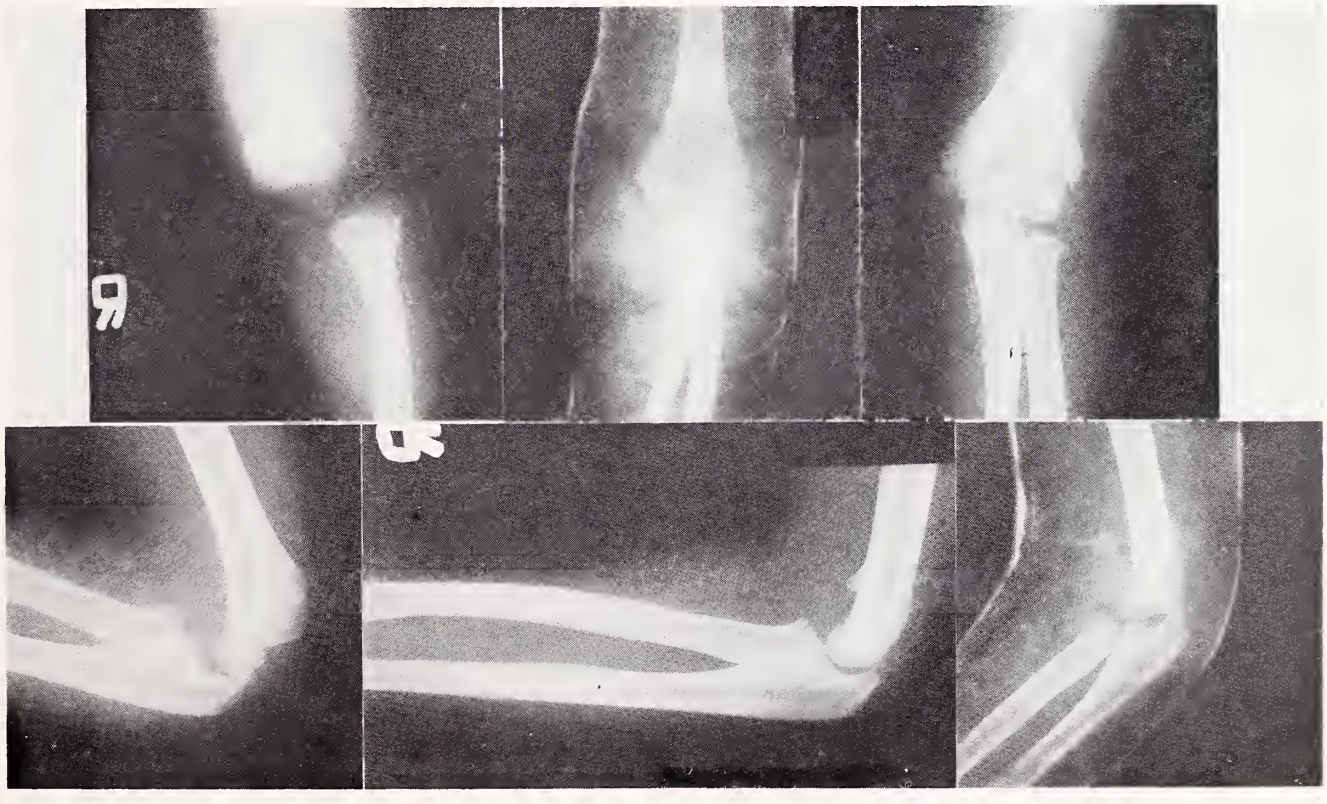

Figure 6. 1. M. Dislocation of the right elbow with fracture of the medial epicondyle. The fracture fragment is in the joint. 2. M. After reduction of the dislocation, the epicondyle has also reduced. Arthrotomy is usually necessary to remove the fragment from the joint. Immobilization in 60° flexion is optimal to regain full strength of the forearm flexors and a painless joint. 3. M. Four months post fracture, normal painless elbow function is present although the fracture has not united.

driven down and forward, piercing the periosteum and entering the soft tissues anteriorly. A combination of blood and bony fragments in the antecubital fossa thus combine to cause vascular compression, contusion and thrombosis below the tight fascia of the forearm. Brachial artery occlusion from actual disruption or severe spasm may be secondary to trauma or ischemia. The results are the well known four—pain, pallor or cyanosis, paralysis and pulselessness and they must be dealt with immediately. If the condition is noted before reduction, manipulation and observation for 20 to 30 minutes is indicated since the radial pulse generally returns and swelling diminishes. If the condition is first noticed post-reduction, an initial decrease of 20-25° of flexion is imperative followed closely by complete removal of all dressings and instigation of traction. Blount emphasizes the emergency nature of the situation, and predicts that irreparable damage will be present after four hours.[9]

When conservative measures don't forestall an impending Volkmann's stellate ganglion block with procaine has been advocated and good results have been said to follow its use. Operative exploration is the ultimate treatment, however, and it should not be delayed if the condition is suspected. The deep fascia of the forearm and cubital fossa is opened widely, hematoma is evacuated and the edematous muscle is decompressed, and an evaluation of the brachial-artery damage is made. If the artery is intact but in spasm, bathing the area in warm saline, 1 per cent procaine, or papaverine solution has been advocated, as well as stripping the enveloping sympathetic fibers from about the artery. If this fails or if the artery has actually been damaged, the involved segment should be resected to decrease reflex spasm in collateral arteries about the elbow.

Nerve injuries were noted by Fahey in 11 per cent of displaced supracondylar fractures.[2] Most authors feel that radial nerve involvement is most common and is followed by median and ulnar disturbances. Inability to flex the thumb and index finger and sensory sparing are often seen when the median nerve is involved. These signs indicate a more posterior location of these fibers in the nerve abutting the fracture fragments. Because spontaneous recovery is the rule, early exploration is not indicated. Rather, it should be delayed until recovery is six to eight weeks behind schedule for the particular nerve involved.

LATERAL HUMERAL CONDYLE

The second most common fracture about the elbow in children occurs through the lateral condyle or capitulum. The highest incidence is among six-year-olds, according to Fahey, and the fracture mechanism is either a traction force pulling the elbow into varus or, less often, a fall on the outstretched arm with the forearm in abduction. The fracture line runs down and medially, entering the joint in the lateral portion of the trochlea. A small flake of the metaphysis with its attached wrist extensors accompanies the capitulum in most cases. Because of the pull of the extensors, the capitular fragment may be rotated through an arc of 90° or more in both the sagittal and frontal planes, with the articular cartilage actually facing the proximal fracture surface.

When little if any displacement is present, lateral compression followed by immobilization in full supination and 90° flexion in plaster for three to five weeks constitutes acceptable treatment. Because of the tendency to lose reduction even with minor displacement, check films should be obtained on the second, fifth, and tenth post-reduction days.

If elbow function is to be maintained and, if initial attempts at closed reduction fail or if adequate reduction is later lost, open reduction must be carried out. A posterolateral or Kocher incision is used, one removes bone spicules and blood and reduces the fragment without detaching the extensor muscles from it. Two Kirschner wires should be inserted through the flake of metaphysis, but because they are of small diameter they will not harm the epiphysis if they transfix it, instead. One bends the wires before cutting them below the skin surface so as to avoid proximal migration and immobilization of the arm in supination and flexion. In three weeks one winnows the cast and removes the wires after applying local anesthesia and nicking the skin. The cast itself is removed 1½-2 weeks later, and *ad lib* activity resumed.

The prognosis is quite good in lateral condylar fractures treated during the first 10-14 days. With delayed open reduction, avascular necrosis of the capitulum may occur and may require bone grafting at a later date. If unreduced, nonunion is the rule, with a limitation of extension, an increase in the carrying angle because of continued growth medially, and a delayed ulnar palsy 15 to 20 years later. Should there be signs of ulnar palsy secondary to valgus deformity a forward transfer of the ulnar nerve may be indicated.

MEDIAL EPICONDYLE FRACTURES

The medial epicondyle is an apophysis rather than an epiphysis, and thus does not contribute to longitudinal bone growth. It serves as the point of origin of the forearm flexor muscles, but is outside the joint capsule. Fractures of this structure caused by a sudden valgus strain and often associated with elbow dislocation are seen in an older group of patients than are supracondylar fractures (average 11.5 years). If displacement of less than 5 mm. is noted on x-ray, the flexor aponeurosis has not been completely torn, and a sling or posterior splint for five to seven days to avoid supination and extension will minimize initial discomfort. Rapid resumption of normal activity must be stressed so

as to avoid limitations of elbow motion from contracture.

When displacement of more than 5 mm. is present, a choice between open reduction and no treatment arises. A study by Wilson of 59 such fractures treated conservatively revealed nonunion in 58.[6] Yet no disability was present in any way, he found deformity only slight. Smith confirmed his findings.[7] Blount,[1] on the other hand, thinks that marked displacement may lead to flexor weakness, and thus he prefers open reduction and fixation in these cases, especially in males, for whom a scar is less disadvantageous. When treated conservatively, the single most important factor in restoring mobility and strength is early activity, and 10-14 days are considered adequate for healing. Synovitis may be present in the area for several months, but a full range of motion will eventually develop, again without the necessity of any passive stretching or other physical-therapy measures.

Open surgery is urgently indicated when ulnar-nerve impairment is present or when the epicondylar fragment has lodged in the elbow joint. In the former instance, the nerve should be freed from bone spicules and transposed anteriorly and away from the damaged area. The fragment is transfixed with Kirschner wires, or if it is small it can be removed and the surrounding flexor aponeurosis sutured to the periosteum at the fracture site. A similar repair can be done after removal of the fragment from the joint. Plaster immobilization at 90° for four weeks is adequate.

ELBOW DISLOCATION

In 50 per cent of the cases, dislocation of the elbow is associated with a medial epicondylar fracture. Unlike the situation in case of supracondylar fracture, physical examination reveals the olecranon posterior to and separate from the humeral condyles. Lateral displacement is often also present. The latter is corrected by medial pressure and then traction applied in line with the humeral shaft to the flexed elbow with further flexion after reduction has been effected. Immobilization in flexion for three weeks allows soft-tissue healing. Passive stretching only increases the myositis ossificans which may be considerable at times, especially if reduction has been delayed. If the dislocation is over two weeks old, an open reduction may be necessary, and prognosis regarding postoperative motion must be guarded.

RADIAL-NECK FRACTURES

Although the mechanism of injury (radial head compression on the capitulum occasioned by a fall on the extended, abducted forearm) is similar, proximal radial fractures in children differ from those seen in adults. The stellate head fracture of adults is not common in children. Rather, one finds a transverse break through the metaphyseal portion of the neck adjacent to the epiphyseal plate. The fragment is displaced and angled radially. If the angulation is less than 20 or 25°, manipulation may improve the situation, but bony remodeling can be expected to produce a similar result. When some apposition and less than 60° angulation are present, varus manipulation of the elbow and medial pressure over the radial head may be successful and should be followed with plaster immobilization for three or four weeks in 45° flexion and mid position as regards pronation and supination. If closed reduction fails and angulation of greater than 25° is present, open reduction is indicated with careful anatomic replacement of the radial head by means of fine hooks. When the elbow is flexed, if the reduction has been accurate, the fragment should be stable without fixation, regardless of forearm rotation. In the extremely unstable fracture, a K wire through the capitulum and into the radial head may be necessary, but such cases are quite rare.

If angulation is less than 45° in this fracture, a relatively good result with mild limitation of supination can be predicted. Often, however, there is a marked restriction of motion early after treatment. Despite the early increase in motion, radial-head excision is not indicated in the child. The likelihood of later gross deformity, with radial deviation of the hand, shortening of the forearm, increase in carrying angle and weakness of the elbow, has served to contraindicate radial-head excision below age 16. Pain over the distal radial ulnar joint, with proximal radial migration, has also been described following the procedure.

LESS COMMON CONDITIONS

Two other conditions are worthy of note in this summary of elbow problems. Subluxation of the radial head (pulled elbow and painful pronation) is a condition seen fairly frequently in children from one to six years of age. The history of a forceful pull or jerk on the child's upstretched hand can usually be obtained from the parent. The elbow is held in 160° of extension and neutral position or mid-pronation, and there are tenderness over the radial head and rubbery resistance to supination or further extension. At this age, the radial head is smaller than or equal in size to the neck diameter. The annular ligament is thought to become interposed between radial head and capitulum after such an injury, and the forearm has then been pronated. Quick supination and extension by the physician causes a sharp pain over the radial head, and often a click is audible. Thereafter the child can quickly resume normal, painless motion. If this maneuver fails, further pronation and flexion may relieve the block to motion. Immobilization in flexion for a week allows repair to occur.

The second condition is partite olecranon (patella cubiti), though it may be confused with a fracture of the olecranon, which itself is an unusual children's fracture. Bilateral involvement is

usual, and thus an x-ray should be taken of the opposite arm to clarify the situation. If an olecranon fracture has occurred, plaster immobilization in extension for four to six weeks is sufficient without internal fixation.

CONCLUSION

Because of the proximity of neurovascular structures and the danger of Volkmann's contracture with its tragic consequences as well as subsequent growth abnormalities, fractures of the elbow must not be treated casually. Early and informed treatment, followed by close personal observation, is necessary if impairment of upper-extremity mobility and function is to be prevented. The general principles outlined must be supplemented and adjusted to handle the precise problems that are encountered in the individual patient.

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Metastasis of Bronchogenic Carcinoma to The Terminal Phalanx of a Finger

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GILBERT J. ROLLER, M.D.
Cedar Rapids

ALTHOUGH METASTATIC LESIONS to the distal phalanges of the fingers from bronchogenic carcinoma are rare, they are being reported with increasing frequency.[1,2,6,10,13,15] However, most of the reports have been published in roentgenologic specialty journals.[2,10,13,15] This paper is intended to bring such phenomena to more general attention. In addition, we should like to emphasize the frequency with which these lesions are mistakenly thought to be inflammatory.[1,2,3,6,10,15]

CASE REPORT

A 63-year-old Caucasian male construction worker was admitted to St. Luke's Methodist Hospital, Cedar Rapids, on November 14, 1964, complaining of progressively severe fatigue during the previous six months. In the two weeks prior to admission he had noted exertional dyspnea. A nonproductive cough, which had been present for many years, had become worse during that time, and was aggravated when he lay on his right side. He denied fever or weight loss. Since 19 years of age he had smoked two packs of cigarettes daily. On admission, his blood pressure was 142/90 mm. Hg. and his pulse was 108/min. His respiratory rate was 24/min., and his temperature was 98.8°F. His heart was normal. Dullness, decreased breath sounds and vocal fremitus were present over the anterior right lower lung field. Chest x-rays showed fluid on the right, but no visible cause. The left lung field was clear. The white blood cell count was 8,600/cu. mm., with a normal differential, the red blood cell count was 5.31 million/cu. mm., the hematocrit was 42 per cent and the hemoglobin was 15.1 Gm. per cent.

Thoracentesis was performed on the second and the eighth hospital day, and approximately 900 cc. of turbid, yellow fluid was obtained each time. Specimens on both occasions were negative for specific organisms by stains or culture. The specific gravity of the first specimen was 1.020, with a cell count of 5,400 red and 600 white blood cells per

Dr. Grant is a pathologist and Dr. Roller is a radiologist at St. Luke's Methodist Hospital, Cedar Rapids.

high-power field. The differential showed 90 per cent lymphocytes and 10 per cent segs. The cell count on the second specimen revealed 2,800 white, 12,800 red blood cells per high-power field, with 87 per cent lymphocytes and 13 per cent segs. Post-thoracentesis chest films showed residual pleural fluid on the right, with an air-fluid level, and a slight elevation of the minor fissure. A mass could not be seen, but an infiltrate was present in the right upper lung field (Figure 1). Papanicolaou smears of the thoracentesis fluid were judged "inconclusive" on the first occasion, and "consistent with malignancy" on the second. Bronchoscopy was negative, yielding material from which no organisms could be isolated and which, on Pap. smear, was "inconclusive." A Mantoux test (0.1 cc.) was strongly positive.

The patient was treated with antibiotics, meperidine p.r.n., and a bed-side-steamer, but did not improve. Pleural fluid reaccumulated six days after the last tap, and at that time he was transferred to a larger medical center. At the second hospital, another Mantoux test was strongly positive. It was elicited that the patient's mother had been treated for TB, and that he had been exposed when 16 years old. A clinical diagnosis of tuberculous pleural effusion was made. He was then discharged on a regimen of isoniazid and para-amino-salicylic acid, and he was told to return on or about December 21, 1964.

He was next seen on December 31, 1964, in the Out-patient Department of St. Luke's Hospital because of concentric swelling of the terminal phalanx of his right fifth finger. It was thought that it might be a tuberculous process, but x-rays showed complete destruction of the bone and their appearance was suggestive of a metastatic lesion (Figure 2). The finger was disarticulated through the first interphalangeal joint, and on gross examination the distal phalanx was found to have been completely replaced by a homogeneous, tan, resilient tumor that did not invade the skin or cross the joint space (Figure 3). The microscopic diagnosis was metastatic carcinoma, probably epidermoid.

When the patient was seen again, in the Out-patient Department approximately one week later, he was markedly jaundiced. At that time, 1,400 cc. of bloody pleural fluid was aspirated from around the base of his right lung, and 60 mg. of Thio-Tepa was instilled.

The patient's last admission was on January 15, 1965. He was emaciated, jaundiced and dyspneic. His liver was palpable below the umbilicus and he was semicomatose. Three hours after admission, he died.

Autopsy. At postmortem, a small focus of mucosal thickening was found in the right upper main stem bronchus. The immediately adjacent lung parenchyma contained a small focus of firm, gray-white tumor, with indistinct borders. The remaining lung tissue on the right was atelectatic, and contained 150 cc. of cloudy pleural fluid. The liver and adrenals contained massive metastatic tumor.

There were great variations in the histology of the tumor. However, poorly differentiated squa-

Figure 1. Postero-anterior chest film showing right pleural effusion and an infiltrate in the right upper lobe.

Figure 2. Postero-anterior and lateral views of fifth finger showing metastatic lesion of distal phalanx.

Figure 3. Gross appearance of metastasis to fifth finger (longitudinal section).

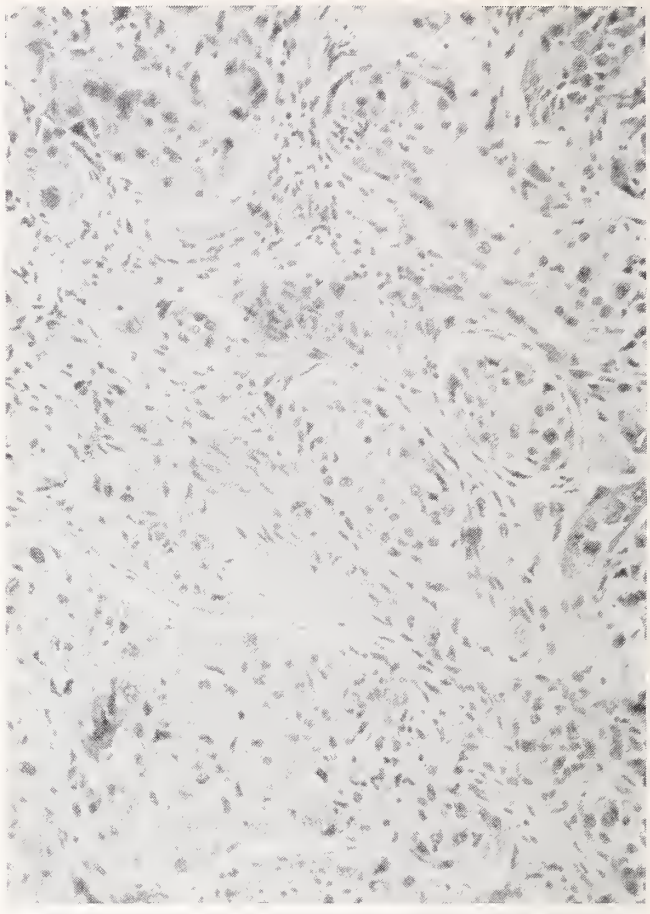

Figure 4. Microscopic appearance of metastatic tumor of distal phalanx.

mous cells, some with indistinct intercellular bridges, were present in sections of the lung, liver and adrenals (Figure 4), and they appeared similar to the tumor seen in the surgical specimen of the terminal phalanx. Adenocarcinomatous foci were present, along with evidence of vascular invasion.

COMMENT

Metastatic lesions of the hand, and especially of the finger, are rare, but the majority of them are from the lungs. Trachtenberg and Roswit[15] reviewed 29 previously reported cases of metastatic hand lesions, added two cases of their own, and demonstrated that 16 of the 31 cases had been secondary to bronchogenic carcinomas. Fourteen of those 16 cases had had a monostotic x-ray pattern. It has been reported that 8 per cent of carcinomas of the lung metastasize to the extremities.[8]

This paper records the ninth case in which, clinically, a metastatic distal phalangeal lesion had been regarded as inflammatory. In other cases, such a lesion has been mistaken for a felon,[1] a paronychia,[15] and a "bag of pus."[14]

Because the initial clinical appearance of a swollen finger frequently simulates an infection, we feel that roentgen examination of the finger should be performed in older patients. For some, this procedure may be life-lengthening, for the metastatic lesion may precede the pulmonary signs and symptoms by lengths of time ranging from six to 16 months.

As they were in our case, the x-ray findings are often characteristic. The destructive process is usually monostotic and rarely crosses the joint space. The tubular bones are usually involved. Although soft-tissue swelling is present, the bone findings are usually those of destruction only, without new bone formation. The lesion, being blood borne,[10] destroys the medullary canal first, and then may either expand or involve the cortex.

CONCLUSION

It is our opinion that any elderly patient with a history of a respiratory problem and a painful lesion of the finger should be examined very carefully. If the roentgen findings are suggestive of metastatic lesion, then a search for the primary lesion should be directed principally to the lungs.

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 463

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

AN EIGHT-YEAR-OLD RIGHT-HANDED GIRL was well until the first week of July, when she was noted to eat "left-handedly." Her father recalls that when he requested that she eat with her right hand, she was able to do so. One or two days later, at the end of a strenuous day with her parents at a local July 4 celebration and carnival, it was noted that she appeared unusually tired and that she limped on her right leg. On July 6, pain and swelling were present in both ankles and in her right wrist. She was fatigued and febrile. She was admitted to the local hospital and treated with Bufferin, 60 grains per day, and penicillin while at bed rest. The diagnosis of rheumatic fever was supported by an antistreptolysin (ASO) titer of 500 Todd units, a throat culture which grew beta hemolytic Streptococci, and an erythrocyte sedimentation rate of 60 mm./hr. During her first few days in the hospital her movements were uncontrolled and clumsy, especially on the right side of her body, and her ailment was diagnosed as Sydenham's chorea.

During the first week in the hospital she improved, but subsequently she complained of decreasing appetite, and of a humming in her head. During the last week of that hospitalization, she was noted to have a heart murmur, although her erythrocyte sedimentation rate had fallen to 13 mm./hr. At the time of her discharge from the hospital on July 30, 1965, she was to receive Bufferin, 10 grains q 4 hrs., and two tablets of penicillin a day.

On the evening of her discharge from the hospital, she complained of nausea, and vomited a reddish-brown material. The emesis continued on the following day, and was not improved by one or two Tigan suppositories. On August 1 she was irritable, she shouted, screamed and thrashed about in her bed, she asked for help, and she was unable to recognize her parents. She was able to retain little fluid or medication, and through that night she received three intramuscular injections of phenobarbital, which helped to control her symptoms. On August 2 she was in a deep sleep, did not respond to verbal stimuli, intermittently kicked her right leg, stiffened her extremities, arched her back, and had noisy, deep respirations. Intramuscular Terramycin and penicillin were administered, and she was transferred to the University Hospitals.

Physical examination revealed a poorly hydrated, unresponsive patient who exhibited intermittent opisthotonos and occasional carpal spasms. There was an inconstant increased tone of the lower extremities, with occasional thrashing of the right leg. The patient's weight was 60 pounds and her rectal temperature was 106°F. Her pulse was 140/min. and regular, her blood pressure was 120/80 mm. Hg, and her respirations were 50/min., with regular increases in rate and depth. Corneal reflexes were absent, her pupils were dilated but reacted sluggishly to light, and the ocular fundi were normal, with venous pulsations. The tympanic membranes were normal. There was constant trismus, and the mouth could not be examined. The chest was resonant to percussion, and there were coarse rhonchi bilaterally but no rales. The heart tones were clear, and no loud murmurs could be heard. The peripheral pulses were normal. The abdomen was soft and there were no palpable organs or masses. The genitalia were normal. There were several small petechiae over the left anterior chest,

and two or three ecchymotic spots on the upper left arm. There was a superficial abrasion with some oozing and erythema on the plantar surface of the small toe of the right foot. The patient had received immunizations for tetanus as an infant, and had had a booster at five years of age.

The patient's temperature was immediately reduced by sponging. Intravenous fluids were administered, and a lumbar puncture was done. The opening pressure was 235 mm. of water, the closing pressure was 105 mm. of water, the fluid was clear, there were no cells, the protein was 52 mg. per cent, the chloride was 138 mEq/L., and the sugar was 73 mg. per cent. A catheterized urine specimen had a specific gravity of 1.034, a pH of 6.0, and an albumin of 2+. Glucose was negative, and a hematest was negative. There were occasional white and red blood cells, and granular casts per high-power field. The ferric chloride test done on a second urine specimen was recorded as negative. The blood pH was 7.47, and the pCO_2 was 17 mm. Hg. The PO_2 while the patient was breathing room air was 101 mm. Hg. The blood barbiturate level was not elevated. The blood salicylate was 29 mg. per cent and after six hours of intravenous fluids it was 23 mg. per cent. Five per cent dextrose in water with 30 mEq/L. of sodium chloride was administered at a rate of 2,000 cc/m^2/24 hours, and once urinary flow became adequate, potassium chloride was added. Ten cubic centimeters of 10 per cent calcium gluconate was added to the initial 500 cc. of fluid infused on an empirical basis. (Laboratory determinations of serum calcium were not available until the following day.) A portable chest x-ray was interpreted as normal and the electrocardiogram was interpreted as normal. During her first few hours in the hospital, the child became less hyperactive and opisthotonic, but she developed definite Cheyne-Stokes respirations, with apneic periods of 30 to 45 seconds, and had intermittent seizures which were controlled by intravenous paraldehyde. Her body temperature was maintained near normal by means of sponging. Emesis of hematest-positive coffee-ground material was controlled by nasogastric suction and 5 mg. of Aquamephyton, administered intramuscularly.

After about 10 hours in the hospital, the patient was becoming hypotensive and frankly cyanotic as her apneic episodes increased in length. She was intubated, placed on a positive-pressure respirator, and given an infusion of modified lactated Ringer's solution with Levophed added. She was soon able to maintain her blood pressure without support, but from that time on she was unresponsive. Her pupils were dilated and fixed, and there was no evidence of cerebral function. An electroencephalogram done on the second hospital day showed no activity attributable to brain. The only electrical activity recorded corresponded to the heart action. Her subsequent hospital course was that of a decerebrate patient. An insufficiency of antidiuretic hormone was documented by demonstrating that the kidney could concentrate urine in response to exogenous vasopressin, although a dilute urine was being produced at a time when serum sodium was elevated.

The patient's heart action stopped on 8-6-65 and resuscitation was not attempted.

CLINICAL DISCUSSION

Dr. C. E. Nelsen, Pediatrics: The case for today will be discussed for the students by Mr. Thomas Thurman.

Mr. T. Thurman, junior ward clerk: We have two diagnostic possibilities to suggest from our evaluation of the protocol. The first is that the patient had rheumatic fever and subsequently developed salicylate intoxication. The second is the more remote possibility that the patient had systemic lupus erythematosus and salicylate intoxication. She had many of the textbook signs of rheumatic fever. She had polyarthritis, Sydenham's chorea, and a heart murmur. Therefore, she had

TABLE 1

LABORATORY DATA

Date	In	Out	Na	Cl	CO_2	K	Ca	P	Comment
	cc/day			mEq/L.			Mg.%		
8-2	600	165	156	115	15	3.9	13	3.0	B.S. 104 mg%; BUN 27 mg%.
(5 hours later)			151	112	17	3.8	16	4.0	
8-3	3200	3015	—	Blood pH 7.34			pCO_2 39 mm. Hg		
8-4 (a.m.)	3650	1710	191	144	25	3.4	10.2	3.2	BUN 19 mg%; Urine SG 1.004
			160	122	24	6.9	8.2	3.4	Repeat while pt. receiving IV vasopressin. Urine SG 1.028.
8-5	4550	2440	152	114	28	5.0	9.2	1.6	BUN 11 mg%.
8-6			136	94	30	3.3			
8-2	Hb 14.6; WBC 15,000 (6 bands, 72 polys, 14 lymphs, 8 monos); platelets 260,000/mm^3; ESR 8 mm/hr.; LE neg.; culture urine and blood: no growth; culture throat: H. para influenza; culture lesion foot: aerobic spore former.								
8-3	LE neg.; T.P. 6.8 gm%; alb. 3.9 gm%; $Alpha_1$ 0.3 gm%; $Alpha_2$ 0.3 gm%; Beta 0.4 gm%; Gamma 1.9 gm%.								

three major Jones criteria. She also had an elevated ASO titer; beta hemolytic Streptococci was cultured from her throat; she had an increased sedimentation rate; and she had a fever. These findings give us considerable evidence to support the diagnosis of rheumatic fever.

But why did she have such an abrupt downhill course? She was getting 60 grains per day of Bufferin, for a maintenance dose. Goodman and Gillman, in their pharmacology text, recommend a dose much lower than this—11¼ grains per day for a girl of this weight. Nelson's TEXTBOOK OF PEDIATRICS recommends a higher dose—35 to 40 grains a day. But the 60 grains per day that she was getting was probably much higher than most authorities would recommend.

At the time of her first hospitalization, she developed four cardinal signs of salicylism. She had a decreased appetite, she reported a humming in her head, she had nausea, and she vomited a reddish-brown material. At the time of her admission here, she had several additional indications of salicylism, but many were quite unspecific. She was dehydrated, and she had a temperature of 106° F. These complications are immediate threats to a patient with salicylate poisoning. She also had a respiratory rate of 50 per min., petechiae, and an increased spinal-fluid pressure. Her blood-salicylate level at that time was 29 mg. per cent. Toxic manifestations have occurred at much lower blood levels than that, and maybe it is important that the protocol says she was unable to retain fluid and medication on August 1. So she may have had a much higher salicylate level two days before the 29 mg. per cent was recorded. Her course seems to have been characterized by circulatory collapse and respiratory failure, and these phenomena would be consistent with salicylate intoxication.

So we believe the patient developed salicylate intoxication, and that it precipitated her death. Our question is, "Did the patient definitely have rheumatic fever?" She also exhibited many signs of systemic lupus erythematosus. Lupus has been reported many times in children only eight years of age, and this patient was a girl. One hundred per cent of children with lupus have fever, and 80 per cent of them have joint symptoms. They can develop carditis and murmurs, and several cases of lupus with Sydenham's chorea have been described. Someone else seems to have been considering the possibility of lupus in this child, for two LE preps, both negative, are listed in the laboratory data. But about 20-25 per cent of the people with lupus do not have positive LE preps.

So finally, we suggest that this patient died of salicylate intoxication, and that she probably had rheumatic fever. But we wouldn't be surprised to learn that she had lupus.

Dr. Nelsen: This case will be discussed for the staff by Dr. Bean, head of the Department of Internal Medicine.

Dr. W. B. Bean, Internal Medicine: The problem of this young girl who died after an illness of not much over a month, is one of sorting out basic pathologic processes and the effects of therapy. It would seem to me that of the two major problems which Mr. Thurman considered, one—the provisional diagnosis of rheumatic fever, rheumatic heart disease, and Sydenham's chorea—stands on quite firm grounds. However, when one proceeds from there to evaluate the possible toxicity from salicylate, and when one speculates on what other things might have been going on in this young girl, the procedure becomes more difficult.

The term *chorea,* as some of you know and as others of you, I am sure, will be glad to learn, comes from the Greek word meaning "dance." St. Vitus' dance, or *chorea Sancti Viti,* simply means "the dance of St. Vitus." St. Vitus was a young child, a victim of the persecutions of Diocletian in ancient Rome. Throughout the Middle Ages, therefore, St. Vitus was the patron saint of actors and dancers. Then, somewhat later, St. Vitus' dance began to be recognized as a clinical phenomenon, and the smart people who could draw an analogy when they saw one thought that victims of chorea indeed were trying to entertain, and thus to get St. Vitus to rescue them from their trouble. It is of interest to read the description of St. Vitus' dance which Sydenham gave about 280 years ago, for his brief description of what he saw in his time coincides very closely with the clinical pattern of the disease in this young girl. The following was written in 1686:

> "St. Vitus' dance is a sort of convulsion which attacks boys and girls from their tenth year until they have done growing. At first, it shows itself by a halting, or rather, an unsteady movement of one of the legs which the patient drags. Then it is seen in the hand of the same side. The patient cannot keep it a moment in its place, whether he lay it upon his breast or any other part of his body. Do what he may, it will be jerked elsewhere convulsively. If any vessel filled with drink be put in his hand, before it reaches his mouth he will exhibit a thousand gesticulations, like a mountebank. He holds the cup out straight, as if to move it to his mouth, but has his hand carried elsewhere by sudden jerks. Then, perhaps, he contrives to bring it to his mouth. If so, he will drink off the liquid in a gulp, just as if he were trying to amuse the spectators by his antics. Now this affection arises from some humour falling on the nerves, and such irritation causes the spasm."

Sydenham's picture of a typical patient, as I have said, is quite similar to what we find in the protocol of this case. This girl began to behave in a very strange manner. Having previously been right-handed, she began one day to eat with her left hand. I don't know whether her father felt she was trying to torment him (as parents sometimes do when the behavior of their children baffles them), but in any event he ordered her to go

back to her usual ways, and at first she was able to do so.

The whole problem of handedness—right-handedness and left-handedness—is one that can be done justice to only by such people as Dr. Russell Myers, who denies the very existence of a dominant side in the body, and of right-handed or left-handedness. But however that may be, "handedness" has been recognized in folk expressions, and for a very long time, incidentally, we have thought that there was something unlucky or even bad about the left hand and arm. The name "Dexter" and the word dexterous suggest that there is virtue in being right-handed. We don't name any of our children "Sinister," the original meaning of which was simply "left," because the word long ago assumed the further meaning of "wrong," "possibly evil" or "misbegotten," thus left-handedness has been looked upon—if not as a disgrace—at least as a handicap. There are, amongst this audience, a number of people who I happen to know are left-handed. I can find nothing particularly "sinister" about them, and certainly they use their left hands "dexterously." But I must quit delving into etymology.

This child's problem developed, or was aggravated, by a long day culminated by considerable physical exhaustion, such as is likely to occur when young children and their families go to a celebration on the Fourth of July, or otherwise excite and exert themselves too much. What happened, then, was that she began dragging her right foot and she lost some control of her right leg.

At about that time, she first displayed the signs of acute rheumatic fever. The signs or symptoms that were observed and all the laboratory tests that were performed were concordant with such a diagnosis. A murmur appeared, joints were inflamed in the characteristic way, the ASO titer was high, throat cultures grew the appropriate beta hemolytic Streptococci, and the sedimentation rate was fast. There was, however, no change in the electrocardiogram either then or somewhat later.

She was treated, as Mr. Thurman pointed out, with a rather heroic quantity of Bufferin—salicylates—in an attempt to get her disease under control. This brings us at once to a couple of therapeutic difficulties to which we must pay some attention. On two occasions at least, the patient vomited or had aspirated a brownish, bloody-looking or coffee-ground-like material. It is well recognized that an aspirin tablet—and despite the advertising this, unhappily, is true of the Bufferin tablet, too, is irritating if directly applied to a mucous membrane. An undissolved tablet in contact with the mucosa of the stomach may produce erosion, inflammation, or every now and then, ulceration. One can demonstrate this quite clearly by examining a person with a gastroscope after aspirin has been given him. A comparable change occurs when an aspirin tablet is left unmoved, in contact with the buccal mucous membrane. Erosion and actual bleeding may occur. This is a phenomenon that is well recognized by pharmacists. Gelatin capsules or enteric coatings for tablets were designed, in part, to get away from the irritating effects as well as from the bad taste, of certain drugs.

During World War II, when there was a passionate conviction that people should ingest a lot of salt, and when there was much less emphasis on their still more urgent need for water when they were in hot environments, we experimented by impregnating salt tablets with barium and having men swallow them either with or without water. As we followed each tablet by means of the fluoroscope, we could sometimes see it rest on the meniscus and move off to the side. The instant the tablet touched the mucous membrane, a sensation of nausea occurred, and occasionally vomiting followed. It was found very quickly that if the individual could tolerate it, it was much wiser for him to break up the tablets or chew them up and swallow them in a salt-water solution, even though salt water had long been used therapeutically as a means of inducing patients to vomit.

As a matter of fact, we failed to find that people had a need for salt tablets in very hot climates if they were eating well, had access to salt cellars at the table, and did not have diarrhea or some febrile disease. The Army seemed especially reluctant to accept the human body's need for replenishing its water supply. It seemed to think it undignified and almost "sissy" for men in the desert to drink water during the day, despite the fact that within four or five hours they might have lost up to 10 pounds through dehydration, becoming intensely hypovolemic, and going into operational incapacity, and sometimes into medical shock. It took a certain number of actual demonstrations to convince the Army that, in fact, in an environment where heat is gained by conduction, convection and radiation, and where the metabolic machines are manufacturing heat, the discrepancy between heat gained and heat lost bodes disaster, even for healthy and vigorous people, within a period as short as 10 or 12 hours, if water is not provided to make sweat for evaporation.

Well, to get back from my warm and arid military digression to the point at hand, the problem during the period of our patient's treatment, and during her transfer from the hospital where she was first taken to this one, was as follows. How much of the nausea, vomiting, weakness, buzzing in the ears and so on, we must ask ourselves, should be attributed to the underlying disease itself—the rheumatic process—and how much of it should be attributed to salicylate intoxication? It seems to me that both probably played roles, but I doubt whether the clinical evidence is sufficiently distinctive so that one can entirely separate the effects of therapy from the effects of the underlying disease. I think a reasonable case can be made for salicylate intoxication. I believe that her tremendously rapid respiratory rate and her relatively high pH were consistent with that. For-

tunately, the local effects of aspirin were not severe enough to do her any great damage, though I do believe they were responsible for her vomiting coffee-ground material.

Now other elements come into the clinical picture after she was admitted to the hospital here. I draw your attention to a couple of things that seem to me to bear very strongly on the probability that another item came into the clinical pattern. She may very well have had tetanus thrown in on top of what she had before. She had such extreme contraction of her jaw and her mouth muscles—the phenomenon that the protocol calls "chronic trismus"—that her mouth could not be opened and thus could not be examined. I have looked through a number of monographs on chorea, and I can find none that mentions that kind of continual spasm as a feature of chorea. In an adult, I would certainly think of lockjaw.

Once you say this doesn't occur or can't occur, you quickly find you have made the mistake of saying "always" or "never." Never say "always" and never say "never," in medicine; say "almost always" or "I have never seen it."

The fact that this patient had had tetanus toxoid inoculations may, of course, be a red herring. She indeed had had a booster dose, but the fact that she had a lesion on a little toe without very much inflammatory reaction about it suggests to me that besides speculating about disseminated lupus erythematosus, the physicians who attended her were concerned about the possibility that the girl had clinical tetanus. Of course, one prefers to make no more than a single diagnosis, particularly in a young patient, since it is much neater to fit everything that has occurred into a unitary system—to assign a single explanation to everything. Nonetheless, we may be fooled if we demand that all of the clinical features of a disease be fitted, by the "method of Procrustes," into a single diagnostic entity. The odds, for lupus as compared with those for rheumatic fever, in an eight-year-old child, I would say rest very strongly on the side of rheumatic fever, and I would put lupus well down in the list of possibilities. I don't think it can be excluded, but I think the signs suggestive of it can be interpreted quite as readily as coming from rheumatic fever, which is certainly a much more commonly encountered disease. When you're uncertain, it is the course of wisdom to make the diagnosis of a rare disease rarely and of a common disease commonly. Therefore, I favor rheumatic heart disease and chorea, but not disseminated lupus erythematosus. The fact that the LE prep was negative twice by no means excludes the diagnosis, but the patient lacked the lesion of lupus erythematosus, which is a discoloration of the cheeks; she had no sign suggestive of a photosensitizing process; and the changes that occurred in her joints were more consistent with those of acute rheumatic fever or acute inflammatory rheumatism, than they were of the more rheumatoid arthritis-like changes that occur in lupus in adults. I have not had much experience with lupus in children; therefore, I am speaking to some extent on the basis of my experience with adults.

The very high fever and the rather surprisingly negative findings in the spinal fluid, except for the high pressure, seem to me to make it quite unlikely that she had meningitis, though she seems to have had meningismus. In fact her tendency to spasm, rather than to a fixed state of rigidity, might be explained on the basis of changes in the central nervous system that occur in chorea, rather than to those that occur in tetanus, though I think tetanus certainly should be thought of as a very real and reasonable possibility quite like salicylism, which might have hurried this poor child toward death.

The deterioration of the central nervous system and cardiorespiratory function, and the appearance of Cheyne-Stokes respiration, are nonspecific but indicate that these systems were laboring under serious disability, and from the point of view of the electroencephalogram, she had lost all cerebral function. Her pupils were dilated; the electroencephalogram showed no more than the activity generated from the electrical changes which occur in the heart. Her pituitary and the hypothalamic region had a share in this total disorganization.

She had a correctable low specific gravity of urine, so she could not make adequate quantities of antidiuretic hormone. This, however, could have been only a relatively minor problem in the total decerebration that had taken place.

The various laboratory findings indicated a consistently high blood sodium and, at first, a high blood chloride. The relatively low carbon dioxide was fairly soon brought up to normal. The blood urea nitrogen, a little high when she came in, came down to reasonable levels. She had a leukocytosis with a shift in the direction we usually see with infections. The other laboratory figures seem to have been those which might readily be expected in the presence of this combination of problems.

Therefore, I conclude that this young girl did have chorea, and that it was associated with a rheumatic process, rheumatic fever. The pathology and the pathogenesis of chorea still are sufficiently nondescript 280 years after Sydenham's time so that we really do not know its cause. We really do not understand it.

From what was found clinically, we cannot predict what will be reported by the pathologists. There is usually some arterial thickening; there may have been changes of the basal ganglia; but since the changes in the basal ganglia are not usually those that give rise to the choreiform movements which characterize the clinical disease, one has to conclude that perhaps the degree of cerebral ischemia, anoxia or asphyxia superimposed on vascular change which tends to be greatest in the basilar portions of the brain, leaves the brain in a state of agitation and perhaps hyperactivity, and that in some way the controlling and moderating

influences of the basal ganglia are not carried on properly.

I believe this little girl probably had some salicylate intoxication, and I think that it undoubtedly helped to disorganize her. I do not believe that she had disseminated lupus erythematosus. From the clinical point of view, I should have been anxious to treat her as though she had tetanus, and should have thought of that as a matter of considerable urgency in her general management.

She became decerebrate; indeed there was a cessation of the usual electrical activity of the brain. In situations like this, one thinks of cerebral abscess and of the possibility that the patient may have had bacterial endocarditis, with a mycotic aneurysm somewhere in the brain. Hemorrhage seems to have been most unlikely in view of the fact that there were no red cells in the cerebrospinal fluid.

The possibility of interpreting some of the findings as coming from intoxication and some as coming from the underlying disease will be left to the pathologists. But I think she had two disorders—the general rheumatic fever process with chorea, and a superimposed tetanus. I do not think one can exclude a helping hand from salicylism, and the situation in her central nervous system was so bad that I should not be surprised to learn that a whole lot more factors were involved.

Dr. Nelsen: Thank you very much, Dr. Bean. I think you've beautifully reconstructed the situation from the information provided in the protocol —information that is much more limited than that which was available to us, having the parents and the child at hand.

We had only about 12 hours to work with the child when she was really clinically alive, and during that time our efforts were directed toward correcting as much of her metabolic disorder as was possible, toward preventing convulsions, and toward keeping her well ventilated. We believed that the excoriation of her foot was the result of her thrashing the leg about, and though we thought about tetanus, we did not really believe that she had that complication. She did not receive tetanus hyperimmune gamma globulin. Our failing to administer it may have been an error, but we reconstructed the trismus as probably a part of the central-nervous-system picture, and of the alkalosis and spasm that were going on elsewhere.

The pathology will be discussed by Dr. Stamler.

Dr. F. W. Stamler, Pathology: It was our interpretation at autopsy that this was a case of rheumatic carditis, although I shall express a slight reservation in that regard.

There were active rheumatic lesions of the mitral and aortic valves. An almost classic plaque of the endocardium of the left atrium was found, and there were focal lesions of the myocardium. The myocardial lesions were not quite the classical ones of active rheumatic myocarditis. There are those who refuse to accept a diagnosis of rheumatic carditis if classical Aschoff bodies cannot be demonstrated. In this case, there were lesions which I regarded as Aschoff bodies in a stage of resolution consistent with the duration of the disease in this child. I feel that these lesions conformed well enough with the classical description of the Aschoff nodule so that we could accept them as genuine. So my diagnosis is rheumatic carditis with associated findings of congestive cardiac failure. The synovial membrane of the right knee showed inflammatory changes which also were consistent with rheumatic synovitis.

As far as the central-nervous-system changes were concerned, the appearance of the brain at autopsy was what one might have expected after hearing the history of the child. The brain was that of a decerebrate individual who had been kept alive for about four days in a respirator. It was a brain which had been extensively damaged in some way, but there was no clue as to the exact form of the damage. Theoretically, it could have been anoxic damage, it could have been hypoglycemic damage, or it could have been some form of toxic damage. This brain could be not distinguished, for instance, from the brain of a child who had suffered cardiac arrest, had then been brought back to life after perhaps 10 minutes, and then had been kept alive in a respirator for four days.

There were certainly no pathognomonic findings to implicate either chorea or salicylate intoxication. There was no evidence of a vasculitis of any kind, and no petechial hemorrhage such as is usually described with salicylate poisoning. I don't think the absence of such findings rules out those conditions, however, and I'm inclined to think that there may well have been a combination of salicylate toxicity and whatever vascular abnormalities may have been associated with chorea.

There was one associated finding, a rather massive infarction of the pituitary gland, including an apparently complete infarction of the posterior lobe, which would accord with the clinical manifestations of diabetes insipidus, but it was most adequately explained by the severe degree of brain damage present.

The mitral valve of the heart in this child showed an almost continuous row of vegetation along the line of closure and toward the free margin of the valve. There was an associated thickening of the chordae tendineae, and the inflammation extended to involve even the base of the valve. The vegetation consisted of masses of fibrinoid material or fibrin on the raw surface, with granulation tissue below. The aortic valve showed similar vegetation, with inflammation and fibrinoid degeneration extending deep into the base of the valve as a nonspecific inflammatory reaction with fibrinoid changes of the collagen. The thickened, inflamed endocardium of the left atrium showed fibrinoid changes in the collagen consistent with the healing stage. There were a number of small scars scattered throughout the myocardium, as well as small foci of degeneration and necrosis of the myocardium. An occasional coronary vessel showed fibrinoid disease, and there was consider-

able disruption of the wall and eccentric subintimal fibroplasia. The myocardium showed a few small perivascular lesions which we interpreted as resolving Aschoff bodies with Anitschkow myocytes in a background of mucoid ground substance and degenerated collagen. A very few multinucleated Aschoff cells were present, but these tend to disappear with chronicity of the lesion and ultimately disappear completely, leaving just a scar.

The pneumonitis of rheumatic fever was probably nonspecific, but at least in addition to the acute inflammation there was some evidence of a more chronic pneumonitis. The liver showed rather extensive fatty metamorphosis, with a rather peculiar washed-out appearance of the parenchymal cells. This is said to be quite characteristic of salicylate poisoning, but certainly is not diagnostic of it. The active degree of inflammation found in the synovial membrane of the knee was consistent with a diagnosis of rheumatic arthritis. There was a focal pancreatitis, with obstruction of numerous pancreatic ducts by inspissated mucus accompanied by acute focal pancreatitis. This finding illustrates the factor of duct obstruction in relation to pancreatic inflammation.

The brain was swollen and softened throughout, with selective degeneration or necrosis of neurones. The neuronal changes were most severe in the brain stem and basal nuclei, but they were seen also in cerebellum, hippocampus and cerebral cortex. Particularly in such areas as the olivary and dentate nuclei, the large pyramidal cell formation of the hippocampus, and the Purkinje cell layer of the cerebellum, many neurones had partially or completely disappeared, and many remaining cells appeared as eosinophilic masses with pyknotic or faded nuclei. The glial cells were better preserved, and the vascular structures were intact, with no evidence of vasculitis or occlusion, so that this was basically destruction of neurones and their processes, rather than complete infarction of the brain. The hypophysis, in contrast, did show apparently complete infarction of the posterior lobe, and massive infarction of the anterior lobe.

Dr. Nelsen: Thank you, Dr. Stamler. I wasn't really responsible for choosing this case, but I think it is representative of the type of problem that may confront the physician. It seems that you and your colleagues in the Pathology Department are unable to give us a definite answer to the question as to why this child died, but do you feel that there was anything unusually severe about her rheumatic fever? The clinical evidence seems to indicate, that there was not. The sedimentation rate was coming down, and other factors seemed to be improving at about three weeks. Was the rheumatic fever of no more than a month's duration and was it ameliorating? Or is there anything else we should say about it? Was there anything in the pathologic findings that would make you regard the rheumatic fever itself as unusual?

Dr. Stamler: The myocardial lesions were not particularly severe, and from their appearance, they were healing. No new lesions were apparent, except for a few small foci of myocardial degeneration. The endocardial lesions were quite active, but I doubt that they had contributed a great deal to the cardiac difficulty. I believe that as far as the cardiac status was concerned, the child was doing reasonably well during the final weeks of her life.

Dr. Henry E. Hamilton, Internal Medicine: When I first looked at this protocol, I started with the last four or five sentences and then went backward to the first sentence. Thus initially, I thought here we had a patient with an infarcted brain. There were localizing brain signs to begin with. Perhaps there was a posterior-fossa tumor or a brain-stem lesion, with herniation of the brain or tumor into the foramen magnum. Though, after looking over the middle part of the protocol, I found that my first notion must be wrong, the fact remains, that the patient ended up here with the characteristics of an infarcted brain. Is that a fair way to put it, Dr. Stamler?

Dr. Stamler: Essentially, yes.

Dr. Hamilton: I think Dr. Bean indicated that he believed the patient had chorea, and also that she had some kind of convulsive disorder. With repeated and severe convulsions, the breath-holding, and the Valsalva experiment performed by this patient, is it possible that there was a marked decrease of blood return into the thoracic cage, and therefore, essentially, that no blood was flowing to the brain for a rather protracted period of time, causing an ischemia or infarction of the brain? Perhaps we could hear from the cardiovascular people on this point.

Dr. W. K. Hamilton, Anesthesiology: I think that Dr. Hamilton's point regarding infarction of the brain, is reasonable. As you read this protocol, you find that the child had one period of apnea lasting 45 sec. and even longer periods subsequently. Such episodes would produce a reasonably severe condition, even without a temperature of 103° F. She had convulsions which were repeatedly treated with paraldehyde. The combination of depressant drugs and apnea frequently produces cardiac arrest, and that was the picture which was seen. I think it is not at all unlikely that such a sequence of events explains the extreme infarction seen in the brain. It may have been a terminal episode, of course, and may not have been related to the primary disease at all.

Do you have any comment about the brain, Dr. McCormick?

Dr. W. F. McCormick, Pathology: I think that when we say "the brain was infarcted," we are being a little careless. The brain was necrotic. That much is definite. The findings in the brain were the same as those you'd expect if the patient had been dead and had lain in an incubator or out in the sun at approximately body temperature for four days. It was necrosis, and not infarction. An ischemic neurone is eosinophilic and has brick-red cytoplasm. We did not see that here. We saw pallor, which indicated autolysis, not anoxia.

Something about the clinical story bothers me.

Before the patient came to this hospital, it was noted that she was in "deep sleep." I wonder whether she was profoundly comatose? She did not respond to verbal stimuli and she showed decerebrate posturing. Does "deep noisy respiration" mean Biot breathing, or what? The patient was moribund before she came in, and I think that if she had been placed on the respirator as soon as she came in, she would still have had the same outcome.

The inappropriate ADH secretion that Dr. Bean alluded to is, of course, seen in all patients with dead brains. It is independent of the posterior lobe of the pituitary, which is only a storage organ, but after just a few hours, if the periventricular and supra-optic hypophyseal nuclei cannot elaborate antidiuretic hormone, the patient will have used any that has been stored in the posterior pituitary, and will exhibit "inappropriate" ADH secretion.

Dr. Nelsen: Thank you, Dr. McCormick. I think that perhaps the child's "deep sleep" on admission could have been described a little better. I think she had something akin to Cheyne-Stokes respiration at that time, actually with varying magnitudes of hyperventilation followed by decreasing magnitudes of ventilation. She wasn't decerebrate and rigid, but was rigid in the sense of exhibiting alkalosis and opisthotonos. Occasionally she would move her right leg up and down, and would move her right arm.

Dr. Nelsen: Yes, I think that was the feeling of the people taking care of her. Most of the time, in these sorts of instances, being put on the respirator constitutes a traumatic event and usually produces periods of apnea longer than one would like. The situation is usually one of those trying ones in clinical medicine where you wish you'd acted sooner though I think we were less regretful about our delay in this case than in many others. The transition, in this instance, between our becoming aware that respiration really wasn't going on well and our putting the patient on the ventilator was probably a little less traumatic and probably involved a little less delay than occurs many times. How much damage took place before that time, I really don't know. As far as this child's brain was concerned, we had her alive for only about 12 hours, and how alive she was when she arrived, no one will really know, but I think the transition from normal to assisted breathing went fairly well. Maybe we should have had her on the respirator and perhaps should have sedated her more right from the very beginning.

Dr. MacQueen, your expertise covers a unique combination of rheumatic fever and pediatric neurology. Would you comment on this girl's course?

Dr. John C. MacQueen, Pediatrics: I have heard this case discussed before, and I remain uncertain as to the cause of death. As a teaching case, it isn't a very good example of rheumatic fever, for there was limited laboratory evidence to support the diagnosis. Furthermore, if a person dies of rheumatic fever, he dies of carditis. He dies of heart failure. This patient didn't have the signs or laboratory evidence of carditis.

Nor is this case a good example of Syndenham's chorea. We have been following patients with the symptoms of chorea for several years. We have followed more than 360 such patients. Sydenham's chorea doesn't cause convulsions. and it doesn't result in catastrophic brain disease. Sydenham's chorea doesn't cause people to die. It is true that patients with chorea die, but they do not die as a result of Sydenham's chorea. In our group of patients with the symptoms of chorea, there were six deaths. Three patients died of cardiac failure, one died of chorea gravidarium and two had chorea as a symptom of lupus erythematosus.

I should dislike to have us leave the impression that Sydenham's chorea is a serious disease. It is a relatively common complication of rheumatic fever, but it is not a severe complication.

I really think we don't know why this patient died.

Dr. Nelsen: Dr. MacQueen, can't a patient with chorea die from exhaustion? He shakes his head "No."

We probably can't establish the cause of this child's death with certainty, but I think that in terms of the future treatment of children with rheumatic fever, it is very important for us to remember that this child could have died from a complication of the *therapy* for rheumatic fever—dehydration, hyperthermia, and vomiting from salicylate intoxication. Exactly which cause was most important, we cannot establish, but I think it's important for us to think along these lines so as to avoid possible treatment errors in the future.

ANATOMIC DIAGNOSES

1. Rheumatic fever:
   a. Rheumatic carditis, chronic and acute, with focal myocarditis and endocarditis of aortic and mitral valves and left atrium.
   b. Rheumatic synovitis, acute.
2. Congestive cardiac failure, with ascites, bilateral hydrothorax and generalized visceral congestion.
3. Lobular pneumonia, bilateral.
4. Cerebral edema and encephalomalacia, generalized.
5. Infarct, recent, anterior lobe of pituitary gland.
6. Chronic interstitial pancreatitis, mild, with acute focal pancreatitis.
7. Fatty metamorphosis of the liver, moderate.

STUDENT'S DIAGNOSES

1. Acute rheumatic fever.
2. Acute salicylism, fatal.

DR. BEAN'S DIAGNOSES

1. Acute rheumatic fever.
2. Salicylate intoxication.
3. Possible tetanus.

WE HAVE MUCH TO BE THANKFUL FOR

Despite the war in Viet Nam and many other disturbing problems, international or domestic, the people of this country have much to be thankful for as Thanksgiving Day approaches. The residents of Iowa, in particular, should give thanks for the bountiful harvest from our fertile soil, for a minimum of poverty among our people, for a stable economy, for the standards of tolerance which are lacking in so many areas of this nation and of the world, for our high level of literacy.

It is fitting that we give a special spiritual significance to Thanksgiving Day, 1966, in gratitude for our many blessings, and that we should offer up prayers on that day for the preservation of the ideals and standards which our forefathers wove into the fabric of the nation, and for the restoration of peace to this troubled world.

OUR BEST WISHES

Those of our readers who are unfamiliar with the ARCHIVES OF INTERNAL MEDICINE not only deny themselves the scholarly contributions of the editor, their fellow Iowan, Dr. William M. Bean, which preface the original scientific articles, but also miss the musings of Dr. E. P. Scarlett which conclude each issue. The reader who is seeking something in addition to medicine *per se* will find enrichment and pleasure in leisurely perusals of these authors' remarks.

In the September issue, Dr. Scarlett has philosophized upon a subject that has attracted poets and thinkers down through the ages—the minimum essentials for a happy life. Never has there been a greater need for such speculation, and for the physician, it is a particularly important topic, inasmuch as health is basic to happiness, and thus transcends most other human concerns. It essentially is reflected in the countenance of each of our patients as he or she enters the consulting room or walks the corridor of the hospital.

Dr. Scarlett, a physician and sage, begins by quoting from the hedonistic philosophers among the ancient Greeks. Then from the Arabs he resurrects an old proverb, "Happiness is found between the breasts of a woman, on the back of a horse, and among the pages of books." For Robert Louis Stevenson, he says, happiness depended upon good health, two to three hundred pounds (sterling) a year, and friends. The yardstick of happiness for Dean Inge, of St. Paul's consisted of wisdom, domestic happiness, and a realization of being wanted and of being useful. F. L. Lucas's measurement of happiness included vitality of mind and body and the activity to use and maintain them; zest and curiosity to animate such activity; freedom to travel through nature and art both in the countries of the world and in the mind; human affections; and the gift of gaiety.

Dr. Scarlett asks his reader this question: "What three things would you wish most for a child of yours?" Without hesitation, he listed his own choices: "good health, a happy marriage, and a quick death."

There can be no disagreement that health of mind and health of body constitute the foundation for a happy life, but it is by no means rare for a physician to see a patient whose handicap appears actually to have elevated his spirit and set him apart from the common man. The blind who feel no rancor and who accept eternal darkness cheerfully inspire us all. The cripple who lets no obstacle deter him from his chosen goals, who asks no sympathy and who enriches the lives of everyone about him is not unusual. Character, courage and good cheer are not restricted to the able-bodied.

A happy marriage is too often taken for granted. Dr. Scarlett says that Oliver Wendell Holmes once asserted that happiness, in this life consists of "four feet on a fireplace fender." The tragedy of the unhappy marriage, with its sad impact upon the participants and upon the children, we see so very often. The beauty of a successful marriage is a cherished wish for all our sons and daughters, but they must be imbued with the concept that it doesn't just happen; it must be earned.

A quick death, Dr. Scarlett's third wish, will prompt questions, though physicians have vivid memories of "the virtual living limbo into which the old move." Thus they must concur with the author that "the worst thing about life is that so often the worst, with its smothering indignities, comes last."

Not content with the limitation that he, himself, has imposed, Dr. Scarlett expresses other hopes that he would have for a child. Congenial work and the joy of companionship in worthwhile effort constitute two of life's greatest joys. Too many of us do work that we can hardly tolerate—and too little of it. Another ingredient of happiness is making something of one's own, whether it is a footstool, a painting, a stamp collection or music. Dr. Scarlett says, "that such activities may be regarded as our partnership, as poor humans, in creation." Still another facet of happiness, he thinks is "the ability to slacken the bow, to acquire

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the grace of active leisure." He would like his child endowed with the supreme gift of imagination, for it is "the leaven of life and living." Lastly, he has placed high on the list the richest blessing of life, loving and being loved.

Everyone confronted with the question that Dr. Scarlett has raised can compile his own list, based on his own experience and philosophy. Indeed, we have some additions that we'd like to make: first, a sense of humor to dispel the gremlins who spill the ink over the manuscripts, or kill the motor on the freeway; and second, the grace of simple faith to make the rough places smooth, to give life a very special meaning and to sustain hope for the life eternal.

A COMPLAINT THAT NEEDN'T DISTURB PHYSICIANS MUCH

With the harvesting of another bumper corn crop we can expect repetitions of the serious farm accidents which occur at this time of the year. The tractor, the power take-off, the cornpicker and the elevator are standard equipment on the modern farm, and they continue to pose hazards to the inexperienced or careless operator.

A recent report by physicians in Oxford, Ohio,* tells of a relatively minor but nonetheless disturbing phenomenon for which the practicing physician should be prepared. In the fall of 1965, a young man who farms near there complained of eye trouble, but his only physical finding was a widely dilated left pupil. Suspecting some serious neurological condition, his general practitioner referred him to a neurosurgeon, who conducted an extensive neurologic examination. The specialist, however, could find no satisfactory explanation for the dilated pupil, and when he saw the patient once more, four days later, the pupil was entirely normal.

Approximately two weeks later, the patient again sought medical help, and on that occasion both of his pupils were found to be widely dilated. In response to more intensive questioning, he then recalled that on both occasions he had been picking corn with a mechanical cornpicker, and had been bothered by getting dust in his eyes. On being asked, he next reported that the cornfield contained considerable amounts of Jimson weed. His mydriasis cleared within a few days, without treatment.

During the succeeding two weeks, two other farmers were seen in Oxford, each with widely dilated pupils as the only physical finding. Both patients reported that they had been picking corn, and upon questioning they acknowledged that quantities of Jimson weed were present in their cornfields.

Jimson weed (Datura stramonium) is an extremely poisonous plant, the leaves of which contain sufficient amounts of atropine-like alkaloids to produce mydriasis. Cornpicking is a dusty operation at best, and on occasion the operator of a mechanical cornpicker must dismount and crawl under the machine to remove some obstructing object. Each of the Ohio patients recalled that perspiration had been running into his eyes during the day's work, and thus there had been ample opportunity for dust from stramonium leaves to enter his eyes to cause dilation of his pupils.

The Ohio physicians reported their experience in the hope that other farmers who consult their doctor because of dilated pupils may be spared needless and perhaps painful neurologic studies.

PREVENTING RECURRENCES OF PULMONARY EMBOLISM

Two recent and quite divergent evaluations from a single medical school of results achieved by ligation of the inferior vena cava to prevent recurrences of pulmonary embolism in patients with thrombophlebitis are of unusual interest. The first report was from the Boston City Hospital and was submitted by surgeons at the Tufts University School of Medicine.* The other study, also by a group from Tufts, concerned work at the Vascular Laboratory of the Lemuel Shattuck Hospital, Boston, and was reported some seven months later.†

In the first study, Nabeth and Moran have pointed out that there are considerable differences of opinion as regards the relative values of anticoagulation, fermoral-vein ligation and ligation of the inferior vena cava for the prevention of pulmonary embolism. Additionally, one can question the wisdom of inferior vena cava ligation in critically ill patients, particularly in symptomatic cardiac patients, and the degree of disability that must be expected from late sequelae in the lower extremities. It was in an attempt to resolve these questions that they undertook a reassessment of their experience. This study was focused primarily upon the problem of the immediate treatment of a patient who has survived one or more episodes of pulmonary embolism and for whom some means must be found to prevent further episodes.

This first study, at the Boston City Hospital, was concerned with the experience with 75 consecutive

* Goldey, J. A., Dick D. A., and Porter, W. L.: Cornpicker's pupil. OHIO STATE M. J., 62:921, (Sept.) 1966.

* Nabeth, D. C., and Moran, J. M.: Reassessment of role of inferior-vena-cava ligation in venous thromboembolism. NEW ENGLAND J. MED., 273:1250-1253, (Dec. 2) 1965.

† Gurewich, V., Thomas, D. P., and Rabinow, K. R.: Pulmonary embolism after ligation of inferior vena cava. NEW ENGLAND J. MED., 274:1350-1354, (June 16) 1966.

patients in whom operations were performed on the inferior vena cava. Ligation had been done in 71 patients, and compartmentalization had been done in four through the creation of multiple channels by means of fine-silk mattress sutures at 5 mm. intervals across the inferior vena cava.

In 54 of the 71 patients the indication for operation had been the failure of anticoagulants to prevent pulmonary embolism. In seven patients with pulmonary embolism, there had been a specific contra-indication to the use of anticoagulants.

Other indications had been progressive iliofemoral thrombophlebitis, septic pelvic thrombophlebitis with multiple pulmonary emboli, and the failure of anticoagulation and femoral-vein ligation to prevent recurrence of pulmonary embolism. In five patients, the operation was done without previous anticoagulation or venous ligation. Except for five patients in whom embolism was thought to be imminent, all had experienced one or more episodes of pulmonary embolism.

In the majority of patients the operation was performed from a right-sided extraperitoneal approach. Ligation was done by inserting two heavy-silk ligatures 0.5 cm. apart. Immediately after operation both of the patient's lower extremities were wrapped with elastic bandages from toe to groin. In 60 of the cases, the foot of the bed was elevated and the patients were kept at bed rest for 10 to 14 days after ligation. In 11 patients, bed rest and elevation of the extremities were not used, but elastic bandages were applied. In 43 patients, anticoagulation and intermittent doses of heparin were started postoperatively, and were continued for 10 to 14 days. When patients became ambulatory, they were discharged wearing full-length elastic stockings and were instructed to sleep with both legs elevated for a period of at least a year.

In the group of 75 patients, 58 had no significant cardiac disease. Among those 58 there were seven deaths, for a mortality rate of 12 per cent. Four of the deaths were not directly related to the operation and thus the corrected mortality was 4 per cent. Of the three operative deaths, one resulted from a pulmonary embolus that originated at the point of ligation. Two patients died within five days after operation from phlegmasia cerulea dolens, with massive pooling of body fluids in the lower extremities. Both of these patients had had moderate degrees of phlegmasia dolens before the operation, and were early cases in the series. Experience has indicated that such patients are better treated by ileofemoral thrombolectomy combined with ligation of the inferior vena cava.

In the group of 17 patients in whom there was significant cardiac disease, there were seven deaths, for a mortality rate of 41 per cent. The deaths resulted from progressive heart failure late in the course of the hospital treatment, and appeared to be quite unrelated to the operation. From their experience, the authors concluded that the results of the operation in that group were so poor that anticoagulation or femoral-vein ligation is preferable.

Forty-nine patients were available for follow-up study between three months and eight years after ligation. In general, the late sequelae were mild. Slight edema was present in about 40 per cent of the group. New varicose veins had developed in approximately 20 per cent, and stasis pigmentation was equally frequent. Varicose ulcers had developed in three patients from one to seven years after ligation; one ulcer had healed following appropriate treatment. Seven of the 49 patients were moderately limited in activity because of disabling leg symptoms, but none were seriously limited and all were able to resume their accustomed occupational activities. Prolonged elevation of the legs at night and the use of elastic hose for at least a year had resulted in a lower incidence of late sequelae than in those patients who had not observed those precautions.

Just two patients (2.6 per cent) had had pulmonary emboli after ligation of the inferior vena cava. In one, a fatal embolus had occurred on the third postoperative day, and at autopsy a residual thrombus was found proximal to the site of ligation. In the other patient a nonfatal embolus had recurred six months after the operation.

The authors declared that ligation of the inferior vena cava is the most effective means of preventing pulmonary embolism, and that with proper postoperative treatment, a low incidence of disabling sequelae can be expected. They asserted that anticoagulation continues to be the mainstay in the treatment of pulmonary embolism, but that the protection is invariable and inconsistent, and that in their experience ligation of the inferior vena cava appears to be a superior method in patients with recent nonfatal pulmonary emboli. Patients with significant cardiac disease must be considered individually, and perhaps plication or compartmentalization of the inferior vena cava will prove superior to ligation in the prevention of recurrent pulmonary embolism.

Quite in contrast to the results achieved by the Boston City Hospital group are those reported by the group at the Vascular Laboratory of the Lemuel Shattuck Hospital. In a 2½ year period, recurrences of pulmonary embolism after ligation of the inferior vena cava were firmly documented in nine patients for a recurrence rate of 20 per cent. These recurrences had taken place from two days to two years after ligation, but most of them had occurred after a period of two months. Three patients had died, and in two of them autopsy had revealed both old and new pulmonary emboli. In six of the patients venograms had been done four months to two years after ligation, and these had

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revealed large, dilated, collateral channels which bypassed the site of ligation. These collateral veins had provided a route for emboli from the legs or pelvis, or had thrombosed and provided additional sources of emboli.

These authors point out that ligation of the inferior vena cava can be a life-saving procedure by preventing large thrombi in the legs or pelvis from breaking off and reaching the lungs during the acute phase of thrombophlebitis and for a varying period thereafter. However, they call attention to the fact that at autopsy most pulmonary emboli are small, and that repeated small emboli can result in death from cor pulmonale. They doubt that ligation of the inferior vena cava will prevent small emboli. The high operative mortality after ligation in patients with congestive failure—the group who have the highest incidence of pulmonary emboli—must always be kept in mind.

Of unusual interest is their contention—and indeed it is a present-day concept—that venous thrombosis in the legs is but a manifestation of a systemic disorder resulting from a combination of altered coagulability and local stasis. The fact that venous thrombosis frequently is a recurrent disease supports this thesis.

The investigators at the Lemuel Shattuck Hospital conclude that ligation of the inferior vena cava is an important but auxiliary form of treatment for pulmonary embolic disease. From their experience they assert that it is indicated chiefly in patients to whom anticoagulants cannot be given or in the occasional patient for whom adequate doses of anticoagulants do not prevent recurrences. They think, furthermore, that it should not be looked upon as a "final" method of treatment, for there will be a significant number of recurrences after the operation.

As in the treatment of most medical conditions, there is apparently no "only" way of treatment for thromboembolism. Greater efforts should be made to prevent it by early ambulation, by preventing venous stasis and through the judicious administration of anticoagulants to those patients who seem most in danger of developing it.

A SECOND BENEFIT FROM SILVER NITRATE THERAPY FOR BURNS

An editorial in the June issue of this JOURNAL reported the program of burn therapy at the Hartford Burn Unit of Barnes Hospital, St. Louis. One of its unusual features was the use of continuous wet dressings of 0.5 per cent solution of silver nitrate which proved to be bacteriostatic, and as a consequence of which, septicemia did not occur in any burned patient. Though silver nitrate was not found to be bacteriostatic to all organisms it was particularly so for Staphylococcus aureus, hemolytic Streptococci, and in most cases for Psuedomonas aeruginosa and Escherichia coli. In patients treated with the silver nitrate dressings, there was much less shedding of organisms in Locke-solution baths than there was in patients whose burns were treated by conventional methods.

A recent report by Moyer and his group at the Washington University Burn Unit* tells of the beneficial results of the silver nitrate technic upon the air hygiene of a burn ward. Heavy contamination of the air about severely burned patients has been known for a long time, and has been recognized as an inevitable accompaniment of the injury. The hazards of cross infection and the odors of a burn ward are phenomena that will never be forgotten by those who have been called upon to care for seriously burned patients. Thus, a method of therapy which is both beneficial to the burn patient and a means of reducing the bacterial contamination in a hospital ward deserves serious attention from all physicians.

In the present study, air was sampled at intervals during a period of two months in two rooms of the surgical-burn unit, and in one of the rooms of an adjacent surgical ward on the same floor of the hospital. The study was made during the winter months in wards heated by convection from hot-water radiators. No provision had been made for circulating or filtering the air in any of the rooms studied. The two rooms in which burns were treated were occupied by 11 patients whose deep burns involved from 12 to 90 per cent of the body surface. During the periods of sampling there was no restriction of activity on the ward, linens were changed and burns were dressed. The technic consisted of the drawing of 10 cubic feet of air through a multistage air sampler at the rate of 1.0 cubic foot per minute. Samples were collected on blood agar and incubated at 37 degrees C. for 24 hours and were then counted.

Surprisingly, the bacterial counts found in the air sampled in the burn unit were relatively low, averaging 6 to 7 per cubic foot. There were no sharp increases in the numbers of bacteria, despite the absence of ventilation. The bacteria were those usually recovered from normal skin, and no correlation could be demonstrated between the densities and varieties of organisms of the burn wounds and the densities and varieties of organisms found in samples of air. The bacterial counts obtained in the burn wards were virtually the same as those found in the general surgical ward, and the organisms cultured were those usually cultured from surgical wards. Surprisingly, Psuedomonas was

* Monafo, W. W., Bernard, H. R., Cole, W. R., Brentano, L., and Moyer, C. A.: Use of silver-nitrate solution in maintenance of air hygiene in burns unit. LANCET 2:303-305, (Aug. 6) 1966.

cultured twice from the air of the surgical ward, but never from that of the burn unit.

The authors conclude that burn wounds of patients treated with gauze dressings wet with 0.5 per cent silver nitrate solution do not serve as an appreciable source of bacterial contamination of the air about them.

The results obtained from the treatment of the seriously burned patient and from the reduction in the contamination of the air in the burn ward commend the technic employed in the Hartford Burn Unit to those elsewhere who are concerned with the care of these unfortunate patients. Indeed any program of treatment which has been shown to minimize the hazard of cross infection in our hospitals deserves the serious consideration of everyone concerned.

SUPPURATIVE ARTHRITIS

A study by clinicians from the State University of New York School of Medicine* at Buffalo has reported on 42 cases of suppurative arthritis treated over a 4½-year period starting in January, 1960. It demonstrates that joint suppuration still occurs with appreciable frequency, particularly in the elderly and debilitated patients and in joints that have been previously damaged by arthritis. These findings indicate that physicians must continue to be alert to the development of this condition, and must not be misled by the common impression that it rarely occurs nowadays, in this antibiotic era.

Excluded from the study were the cases of infectious arthritis due to gonococci, meningococci, fungi or tubercle bacilli. Also excluded were the cases of pyogenic joint infection resulting from osteomyelitis, penetrating wounds or extensions of infection.

In 38 of the cases, the diagnosis was substantiated when the causative organism was recovered by aspiration of the synovial fluid. In four patients in whom there was clinical evidence of suppurative arthritis, the organism was recovered from the blood. Unless the causative organism was recovered either from the joint or from the blood, the patients were excluded from the study, even though the clinical course and therapeutic response were suggestive of suppurative arthritis. The majority of the patients were males, and most of them were over 50 years of age. There were only seven patients under 20 years of age.

The involved joints showed the classical signs of acute inflammation, and limitation of motion was invariably present. The usual systemic symptoms which accompany an acute infection were present, but five of the 42 patients were afebrile.

The source of the infection was considered to be hematogenous in most of the cases. In 23 there was an infection elsewhere in the body—pharyngitis, otitis, pneumonia, furunculosis, pyelonephritis. In five patients the signs of infection occurred after aspiration of the joint and were thought to be due to implantation. In 14 of the group, there was no apparent source of infection, but it was felt that in these, too, the cause had been hematogenous spread.

Staphylococcus aureus was the causative organism in 25 patients, and in 13 of these there was evidence of infection elsewhere. Implantation by aspiration of the joint was considered to be the cause in four patients. The source of the infection in eight patients was unknown. In this group of 25 patients, Staphylococcus aureus positive blood cultures were obtained in 16. Aspiration of synovial fluid resulted in a growth of streptococci in six patients. (There was a known focus of infection for three of this group, and in one patient the infection was thought to be the result of implantation.) Pneumococcus was the causative organism in nine patients, five of whom had pneumonia. Escherichia coli was found in two patients, one of whom had pneumonia and septicemia.

In 32 patients the infection was confined to one joint; in 10 the infection was polyarticular; and a total of 26 joints were involved. Multiple joint involvement appeared to occur in the more severe systemic infections, seven of which were staphylococcal and three pneumococcal. Positive blood cultures were obtained in nine of the 10 patients with multiple joint involvement. Most of the limb joints were involved, but infections of the knee were most common, occurring in 21 of the 60 septic joints in this group of 42 patients.

Predisposing factors were present in the majority of the patients. Local abnormalities were thought to have contributed to the development of suppurative arthritis in 28 of the 42 patients. These factors consisted of a history of trauma or of definite joint disease, or a neuromuscular disorder. Systemic disease was regarded as a contributing factor in 32 patients. Patients with rheumatoid arthritis who were receiving corticosteroid therapy and patients with diabetes mellitus made up most of this group. In six patients no contributing factors could be demonstrated. All of these patients had been in excellent health, and all but one were under 19 years of age. Five of the six had staphylococcal infections, and one had a pneumococcal infection. The reason for the development of such a serious suppurative process in these previously healthy young patients could not be explained.

All patients were hospitalized and their treatment included rest in bed, traction, splinting and appropriate physiotherapy. Treatment was primarily medical and included large doses of systemic antibiotics. Thirty-three patients were treated medically, but nine patients underwent surgical drainage in addition to antibiotics and the

* Argen, R. J., Wilson, C. H., and Wood, P.: Suppurative arthritis. ARCH. INT. MED., **117**:661-666, (May) 1966.

Editorials continued...

usual ancillary measures. There were 14 patients with streptococcal or pneumococcal infections, and they were successfully treated by penicillin alone. Patients with staphylococcal infections were treated by penicillin alone or in combination with other antibiotics, depending upon sensitivity studies. In seven cases, the staphylococci were completely resistant to penicillin, and in those instances other antibiotics were employed.

In 17 of the medically treated patients, only diagnostic aspiration of the involved joints was done. In the remaining patients frequent aspirations were performed to assure adequate drainage, in one patient aspiration was done 25 times, and the outcome in that case was good. In each of the 17 patients who were aspirated, intra-articular antibiotics were used at one time or another. The drug chosen was usually penicillin, in doses varying from 10,000 to 100,000 units. It is emphasized that frequent aspiration is an important adjunct to antibiotic treatment, for aspiration relieves the joint pressure, removes necrotic material and autolytic enzymes and also is helpful in determining whether systemic antibiotic treatment has sterilized the joint cavity.

Three patients died from overwhelming infection shortly after admission to the hospital. The remaining medically treated patients recovered completely from their infections. The ultimate functional result was dependent upon two factors: the state of the joint before the infection; and the duration of the suppurative process in the joint.

Of the nine patients treated surgically, in three the operation was performed before antibiotic therapy was started. In two patients inappropriate antibiotics had been given. One patient with a pneumococcal infection was operated upon after 10 days of penicillin therapy. Two patients, one with a staphylococcal and one with an E. coli infection, had surgical drainage of a joint after long-term treatment with chloramphenicol. Another patient required operative treatment after 12 days of treatment with methicillin.

Among the group of patients treated, either medically or surgically, there were no instances of reinfection, fistula formation or chronic osteomyelitis. Postinfectious synovitis, which developed after the infection was controlled, was observed in 16 patients. The one feature of the therapy for all of the patients who developed synovitis consisted of repeated injections of an antibiotic into the affected joint. Six patients who were not given this form of therapy failed to develop this complication.

The authors emphasize that though needling a possibly infected joint is necessary for accurate diagnosis, one must remember that this procedure and the installation of medication are not without risk, and they should be done only by people who are skilled in the proper technics.

Suppurative arthritis, the New York group says, should be regarded as a possibility in any patient in whom a joint suddenly becomes more inflamed or who develops joint symptoms during the course of bacteremia. The affected joint should be aspirated without delay, and the most important study of the synovial fluid is the culture of organisms. Since as many as two-thirds of the patients in this series had a systemic illness such as diabetes, cirrhosis or arthritis being treated by oral corticosteroids, the physician must be alert to the recognition of suppurative arthritis in patients with chronic disease.

The frequency of positive blood cultures in this group of patients suggests that each patient should be treated on the assumption that he has septicemia. It is recommended that very large parenteral doses of penicillin—at least 8 mega units—be given daily, and continued for three weeks. The affected joint should be aspirated when fluid accumulates, and the procedure may be necessary daily.

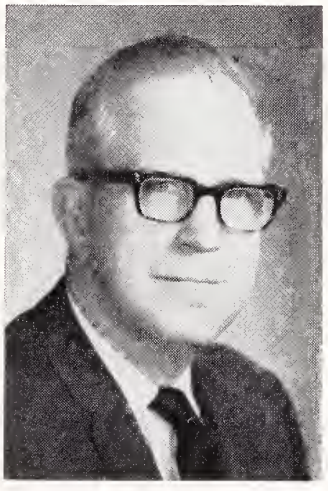
Incision and drainage of a joint should be looked upon as an alternative form of treatment, and should be considered in patients with antibiotic-resistant infections. However, incision and drainage are no substitute for appropriate chemotherapy.

The authors conclude that joint suppuration is not uncommon, and that it occurs most often in elderly patients, in those with systemic disease and in those whose joints have been previously damaged by arthritis. Systemic antibiotic therapy yields excellent results, but it should be combined with repeated aspirations of the affected joint so that adequate drainage may be maintained. The injection of antibiotics into the joint should be avoided, for it appears that synovitis is likely to occur after the patients recover from the infection.

Winter Driving Tips

1. Avoid sudden acts in braking, accelerating or steering to avoid skidding.
2. Slow down—winter driving conditions require greater caution.
3. Maintain even speed, especially on snow or icy roads.
4. Allow greater distance when following a car.
5. Pump brakes when slowing or stopping on snow or ice.
6. Use lower gear descending icy hill.
7. Keep gas tank as full as possible to avoid gas tank condensation. Traffic tie-ups also consume gas.
8. Conserve battery by decreased use of electrical accessories.
9. Guard against monoxide poisoning—leave one window partially open.

President's Page



On Sunday, October 9, in an impressive ceremony the Iowa Medical Society's new office building was dedicated. Our new home is a tribute to the great traditions in Medicine which have been passed on from those physicians who have preceded us. Our building, whose architectural lines denote strength and character, should inspire each of us to contribute our share in further enhancing the dignity and effectiveness of a great profession. Only by so doing do we fulfill our true obligations to Medicine.

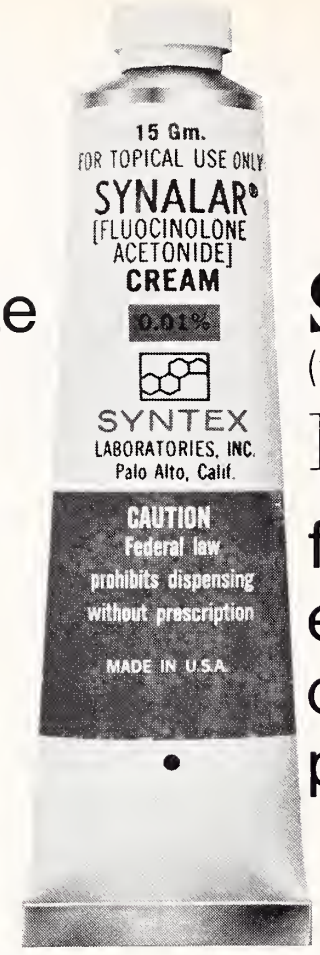
On Friday, October 15, I witnessed in action the ultimate in dedication by physicians and others in the health fields. As some know, my home town was hit by a devastating tornado. Many of my townspeople were killed or injured. Immediately, and without regard to personal safety, scores of physicians and personnel from outside the area arrived to provide invaluable services. To other nearby hospitals were sent numerous patients to lessen the overload on local facilities. All those involved were dedicated to one purpose—helping their fellowmen in a time of peril. Through these tremendous efforts many lives were saved. This was Medicine in one of its finest hours.

The heritage from the past and the deeds of the present combine to assure a richly endowed future. To this we in Medicine are dedicated.

D. P. Leinbach

President

new small size



Synalar® 0.01%
(fluocinolone acetonide) **cream**
15 Gm.

for even greater economy in office or hospital practice

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Now you can prescribe as little or as much Synalar Cream 0.01% as is needed for a particular therapeutic problem in a size that permits the greatest economy for your patient. The new 15 Gm. tube, for example, is best suited for short-term therapy and for small sites. For more extensive body areas prescribe the 45 Gm. tube—a size that's also ideal for your treatment table. And the 120 Gm. jar is most economical for hospital use. Thus, with Synalar Cream 0.01%, you have the superiority of a modern topical corticosteroid shown to be more effective than 1% hydrocortisone[1-3] plus the economy that makes therapy practical for use in more dermatologic conditions, in long-term maintenance, with occlusive dressings in resistant cases, and in extensive area involvement.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. 2. *Occlusive dressing method*—With occlusion of extensive areas, systemic absorption of the corticosteroid may occur, and suitable precautions should be taken. Occasional patients may show contact sensitivity to a particular dressing material or adhesive. Miliaria, folliculitis, or pyodermas have been seen infrequently with the use of this technique. The development of infection requires appropriate antibacterial therapy and discontinuation of the occlusive dressing method. Local atrophy and striae have been reported with protracted occlusive dressing therapy. While lesion relapses can be expected to occur in many psoriatic patients, remissions may persist for several weeks to several months in favorable cases. The patient whose psoriasis is in an active stage, with recent appearance of new lesions, may not be a good candidate and may show early relapse. Some plastic films may be flammable, and due care should be exercised in their use. Similarly, caution should be employed when such films are used on or left near children to avoid the possibility of accidental suffocation. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. **References:** 1. Cahn, M. M., and Levy, E. J.: J New Drugs 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: J Irish Med Ass 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Dunseath, W. J. R.: Southern Med J 56:797 (Jul.) 1963.

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THE JOURNAL *Book Shelf*

BOOK REVIEWS

FERMENT IN MEDICINE, ed. by *Richard M. Magraw*, M.D. (Philadelphia, W. B. Saunders Co., 1966. $6.50).

This is a bitter and unpalatable draught which the medical educator here prescribes for the medical practioner. Written before the Medicare Law became effective, this book seeks to delineate the forces which have brought about the drastic changes in the form of medical practice, and to pinpoint "those elements in traditional forms of medical practice which are essential to optimal medical care."

Examining the role of the physician in relation to his patient as a social problem, Dr. Magraw does not hesitate to trample on sensitive toes. The failure of medical education to solve the dilemmas in the physician-patient relationship, he attributes in part to the "increasing isolation of the research oriented medical center from the social role of medicine."

But he lays about impartially in chastising the medical family. Organized medicine, he asserts, "has largely surrendered its leadership of American Medicine." He deplores the fact that care of a disease has replaced care of the patient. And he shows no great respect for the holy of medical holies: "Free choice [of physician] is more important to the doctor than it is to the patient."

Noting the decline in the number of physicians interested in direct patient care, the author points out that the increasing status and importance of hospitals reflect the fact that medical practice is changing from an individual enterprise to a cooperative function of teams and specialists.

The pressures on medical schools exerted by federal grants for research are explored and deplored. The research-bound young scholar, he believes, should be encouraged "not to detour through medical school."

The role of the third party in the delivery of medical service to the consumer must be accepted as a fact of life, believes Dr. Magraw. Physicians have not only abdicated the leadership they should have exercised in developing economic and social arrangements for medical care, he warns; their opposition to change "can only lead to unwise, not to say punitive and vengeful, political action."—*Herman J. Smith*, M.D.

PATHOLOGY, FIFTH EDITION, 2 vols., ed. by *W. A. D. Anderson*, M.D. (St. Louis, C. V. Mosby Company, 1966. $21.00).

This current two-volume edition continues to present an encylopedic review of pathology written by 39 academic pathologists, each of whom is a recognized specialist in his respective area of interest.

Chapter I, entitled "Cells and Their Behavior" deals immediately with ultrastructure of electron microscopy and human chromosomes. This dynamic approach is characteristic of the current concepts which are used throughout.

Small but easily readable type and a two-column format have made it possible for the printer to keep the size of the volumes to a total of 1,439 pages.

Chapters of particular interest are those on Autoimmunity and Hypersensitivity Diseases, Mesenchymal Tumors, Congenital Heart Disease, and the Kidney.

This work is a must for all practicing pathologists. In addition, the dynamic approach to pathologic physiology makes it a ready reference for any physician's library shelf.

It is enthusiastically recommended.—*John W. Green, Jr.*, M.D.

BOOKS RECEIVED

EARLY MANAGEMENT OF ACUTE TRAUMA, edited by *Alan M. Nahum*, M.D. (St. Louis, C. V. Mosby Company, 1966, $21.00).

OCULAR PHARMACOLOGY, by *William H. Havener*, B.A., M.D., M.S. (St. Louis, C. V. Mosby Company, 1966, $21.75).

THE OCULAR FUNDUS IN NEUROLOGIC DISEASE, by *William Fletcher Hoyt*, M.D., and *Diane Beeston*, A.B. (St. Louis, C. V. Mosby Company, 1966, $35.00).

MODERN HOME REMEDIES AND HOW TO USE THEM, by *Morris Fishbein*, M.D. Garden City, Doubleday & Company, Inc., 1966, $3.95).

MODERN TREATMENT, Vol. 3, No. 4, CHEMOTHERAPY FOR CANCER, edited by *B. J. Kennedy*, M.D., TREATMENT OF RESPIRATORY ALLERGY, edited by *Samuel O. Freedman*, M.D. (New York, Hoeber Medical Division, Harper & Row, Publishers, 1966, $16.00 per year).

THE NEW WAY TO LIVE WITH DIABETES, by *Charles Weller*, M.D. and *Brian Richard Boylan* (Garden City, Doubleday & Company, Inc., 1966, $3.95).

EPILEPSY AND THE LAW, by *Roscoe L. Barrow* and *Howard D. Fabing*, M.D. (New York, Hoeber Medical Division, Harper & Row, Publishers, 1966, $5.95).

QUESTIONS AND ANSWERS IN ORTHOPAEDICS, by *Floyd G. Goodman*, B.S., M.D., and *George R. Schoedinger, III*, B.S., M.D. (St. Louis, C. V. Mosby Company, 1966, $9.85).

THE SCHOOL AND THE COMMUNITY TREATMENT FACILITY IN PREVENTIVE PSYCHIATRY, edited by *Ralph H. Ojemann* (Iowa City, Proceedings of the Fifth Institute on Preventive Psychiatry, 1966, $2.00).

IT ALL STARTED WITH HIPPOCRATES, by *Richard Armour* (New York, McGraw-Hill Book Company, 1966, $3.95).

A HANDBOOK FOR NEUROTICS, by *Alf T. Haerem*, M.D. (Boston, The Christopher Publishing House, 1966, $3.95).

CURRENT PRACTICE IN ORTHOPEDIC SURGERY 1966, by *John P. Adams*, B.S., M.D., F.A.C.S., Editor (St. Louis, C. V. Mosby Company, 1966, $18.75).

FUNDAMENTALS OF GENERAL SURGERY, by *John A. Gius* (Chicago, Year Book Medical Publishers, Inc., 1966, $13.95).

SURGICAL DISEASES OF THE CHEST, by *Blades*, Editor (St. Louis, C. V. Mosby Company, 1966, $25.00).

"'Tranquilizer' is not a good word"[1]

THIS classification is psychologically too seductive, pharmacologically too unspecific, and in terms of results not infrequently untrue."[2]

What is a tranquilizer? According to the 24th Edition of Dorland's Medical Dictionary[3] a tranquilizer is "an agent which acts on the emotional state, quieting or calming the patient without affecting clarity of consciousness."

Defining a drug by its effects, however, can be misleading. The same effects by which the dictionary defines a tranquilizer have sometimes been seen after administration of a sedative — or, for that matter, a placebo.

Ambiguous though the term may be, it appears to be here to stay. The 1966 edition of the Physicians' Desk Reference[4] lists 42 tranquilizers indicated for treatment of anxiety and apprehensive states.

'Tranquilizers' have differences in action, differences in effect

Although all tranquilizers are intended to calm anxious patients there *are* differences in their actions — and in their effects. They have been divided into three categories — the rauwolfia group, the 'minor' tranquilizers, and the phenothiazines.[5]

Although the tranquilizing effect of rauwolfia has been known for centuries, its use as an antipsychotic agent in current practice has diminished.[5]

A 'minor' tranquilizer is often prescribed to achieve more than one effect. Thus, besides being tranquilizers some of these compounds may be muscle relaxants, antihistaminics with some calming action, anticholinergic sedatives, or antispasmodics.[5]

The phenothiazines are considered 'major' tranquilizers because they alter psychotic behavior.[1] This classification may have done them more harm than good because it implies that the phenothiazines should be reserved for the more severely disturbed. This is not necessarily true.

The phenothiazines — and the problem of sedation

One of the problems of prescribing phenothiazines for ambulatory patients has been the fear that excessive sedation will impair the patient's ability to function. This, however, is less of a problem with some of the phenothiazines.

"Clinically they may be differentiated primarily in terms of their potency and the extent of their sedative effect, which appear to be inversely proportional. That is, the least potent, the one which is used in highest dosage, chlorpromazine, is the most sedative, while the reverse holds true for fluphenazine."[6]

In a recent report on various studies conducted over several years evaluating 360 patients treated for anxiety and stress with seven phenothiazines, this inverse relationship of potency to sedation was confirmed.[7] Also under consideration was the degree to which the particular phenothiazines neutralized anxiety (the angolytic index). Interestingly enough there was, again, an inverse relationship. The most sedative of the phenothiazines appeared to be the least active in neutralizing anxiety. Fluphenazine, one of the least sedative, on the other hand, was found to be most effective in relieving anxiety.[7]

RELATIVE SEDATIVE AND ANGOLYTIC INDICES OF PRINCIPAL PHENOTHIAZINES*

DRUG	SEDATIVE INDEX	ANGOLYTIC INDEX	BASED ON STANDARD DOSE OF
Chlorpromazine	100	15	25 mgs.
Triflupromazine	100	15	25 mgs.
Thioridazine	90	17	25 mgs.
Perphenazine	15	25	4 mgs.
Carphenazine	25	25	25 mgs.
Trifluoperazine	3.3	95	2.0 mgs.
Fluphenazine	3.5	100	2.5 mgs.

*adapted from Sainz[7]

Prolixin is therapeutically effective without excessive sedation

When used as a 'tranquilizer' in general medical practice, in many patients Prolixin (Squibb Fluphenazine Hydrochloride) suppresses anxiety, but not normal activity. These two features are of particular importance to patients who must be able to live and work without their normal daily activities being restricted.

Because of its longer duration of action, Prolixin, in doses of as little as one to three milligrams in adults, generally taken once a day, is effective in maintaining many patients free of their symptoms of anxiety and tension.

Contraindications: Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use with caution in patients with a history of convulsive disorders. Severe reactions may occur in patients with idiosyncrasy to other centrally-acting drugs, and severe hypotension may occur in patients with special medical disorders, e.g. mitral insufficiency and pheochromocytoma.

Precautions: Effects of atropine, anesthetics and C.N.S. depressants may be potentiated. Hypotension may occur in patients undergoing surgery. Do not use epinephrine for treatment of the hypotensive reactions which may appear in patients on phenothiazine therapy.

Side Effects: Extrapyramidal reactions, allergic skin reactions, the possibility of anaphylaxis, drowsiness, visual blurring, dizziness, insomnia, nausea, anorexia, salivation, edema, perspiration, dry mouth, abnormal lactation, polyuria, hypotension, and jaundice and biliary stasis may occur. Routine blood counts are recommended to determine possible blood dyscrasias; if symptoms of upper respiratory infection occur, discontinue drug and institute appropriate therapy.

Available: 1 mg. tablets. Bottles of 50 and 500.

For full prescribing information, see package insert

References: 1. Simpson, G.M.: Postgrad. Med. 39:557, 1966. 2. Freyhan, F.A.: Am. J. Psychiat. 115:577, 1959. 3. Dorland's Illustrated Medical Dictionary, ed. 24, Philadelphia, W. B. Saunders Co., 1965, p. 1603. 4. Physicians' Desk Reference, 1966, Oradell, N.J., 1965, p. 310. 5. Cohen, S.: Northwest Med.: 65:197, 1966. 6. Detre, T., and Jarecki, H.: Connecticut Med. 25:553, 1961. 7. Sainz, A.: Psychosomatics 5:167, 1964.

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against the usual gram-negative urinary pathogens

Why use five...where one will do?

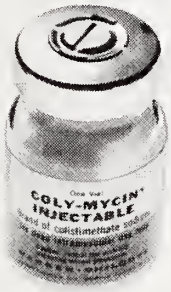
In a recent 217-patient hospital study,[1] urinary tract infections were treated with a variety of widely prescribed antimicrobial agents including: a sulfonamide (40 patients), chloramphenicol (20 patients), nitrofurantoin (33 patients), nalidixic acid (30 patients), tetracycline (27 patients), colistimethate sodium (22 patients)... and 2 combinations of 5 agents each (45 patients). The 2 combinations were selected to afford maximal theoretical antibacterial coverage against the usual urinary pathogens. They were (1) tetracycline, chloramphenicol, nitrofurantoin, ristocetin and polymyxin B; and (2) tetracycline, chloramphenicol, erythromycin, nitrofurantoin and colistimethate sodium.

This clinical study shows that the two combinations of antibiotics were not superior to some of their single components. The authors point out that antibiotic antagonism often negates theoretical advantages of multiple therapy. Coly-Mycin Injectable (colistimethate sodium) was one of the single components that was shown to be equal to the combinations and eradicated bacteriuria in two-thirds of the patients.

Theoretical choice of multiple antibacterial therapy has been shown to be no more effective than one well-chosen agent which also offers least patient exposure to possible side reactions, toxicities, allergic manifestations and higher drug costs.

1. McCabe, W. R., and Jackson, G. G.: New England J. Med. 272:1037, 1965.

in gram-negative urinary tract infections often the single well-chosen agent



Coly-Mycin® Injectable
(colistimethate sodium)

Indications: Especially indicated for the treatment of severe acute and resistant chronic urinary tract infections due to sensitive strains of gram-negative organisms. Also indicated in respiratory tract, surgical, wound and burn infections and in septicemia due to sensitive organisms. Particularly indicated when any of these infections are caused by sensitive strains of *Pseudomonas aeruginosa.*

Adverse Reactions: Occasional reactions such as circumoral paresthesias, tingling of the extremities, pruritus, vertigo or dizziness may occur. Reduction of dosage may alleviate symptoms. Therapy need not be discontinued, but such patients should be observed with extra care.

Warning: Patients should be cautioned not to drive vehicles or use hazardous machinery while on therapy.

Precautions: In cases of impaired or suspected renal impairment, use with greater caution and reduce dosage in proportion to extent of impairment. Transient elevations of BUN have been reported. As a routine precaution, appropriate blood studies should, therefore, be made during prolonged therapy.

As with all polypeptides, the possibility of muscular weakness, including apnea, due to inadvertent overdosage or normal dosage in the presence of impaired renal function, should not be overlooked. In cases of apnea, medication should be promptly discontinued and assisted respiration given until serum levels fall and normal breathing is restored.

Other antibiotics, such as kanamycin, streptomycin, dihydrostreptomycin, polymyxin, and neomycin, may also have varying neurotoxic or nephrotoxic potential. They should be used with great caution concomitantly with Coly-Mycin Injectable (colistimethate sodium).

For deep intramuscular injection only.

Dosage: By the I.M. route only, in 2 to 4 divided doses ranging from 1.5 to 5 mg./Kg./day (0.7 mg. to 2.3 mg./lb./day). Average adult dose is 2.5 mg./Kg./day (1.1 mg./lb./day). In the presence of bacteremia, septicemia, or other serious infection, greater than average doses may be required; however, maximum daily doses should not exceed 5 mg./Kg. (2.3 mg./lb.) where renal function is normal.

Not recommended against Proteus.

Colistin is also available (as colistin sulfate) in: Coly-Mycin® Pediatric for Oral Suspension (not for systemic use), and Coly-Mycin® Otic with Neomycin and Hydrocortisone.

Full information is available on request.

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WARNER-CHILCOTT Morris Plains, New Jersey

Annual Meeting of the Iowa Chapter, AAGP

Dr. Raymond F. Frech, of Newton, was installed as president of the Iowa Chapter of the American Academy of General Practice at the 18th Annual Meeting held at the Hotel Savery in Des Moines on September 19 and 20. Other officers elected were Drs. Lee Rosebrook, of Ames, president-elect; and H. E. Rudersdorf, of Sioux City, vice-president. Dr. George Kern, of Des Moines, re-elected secretary-treasurer.

New members elected to the Board of Directors were Drs. Richardson E. Clark, of Manchester, to a two-year term; and Charles Beckman, of Kalona, and Melvin Scheffel, of Malvern, to three-year terms. Dr. William Castles, of Dallas Center, was re-elected delegate to the AAGP and Dr. Frech was re-named alternate delegate.

The 18th annual meeting was attended by 220 physicians. The total attendance was 329, including exhibitors, ladies and guests. An honored guest at the meeting was Dr. Amos Johnson, of Garland, North Carolina, president of the American Academy of General Practice. Dr. Johnson spoke at the noon luncheon on Monday. He described new concepts which will have a bearing on the family physician; he also assessed the potential of the Academy within the next ten to 20 years. Dr. Johnson mentioned he had flown over and around Iowa but had never had an occasion to visit the state before.

The annual banquet was held on Monday evening and among the honored guests were Dr. Robert E. Carter, Assistant Dean of the U. of I. College of Medicine, and Mrs. Carter. During the evening program Dr. Elmer M. Smith, of Des Moines, a member of the Board of Directors of the American Academy, presented Dr. Carter with a Meritorious Service Award plaque. Dr. Carter was selected to receive this award by the Congress of Delegates of the American Academy. This award is presented only to persons who have given of their time in an outstanding manner to the Academy. Dr. Carter has assisted the Academy in the design and development of educational programs for the training of future family physicians.

On Tuesday the luncheon speaker was Dr. Galen M. Tice, former professor and head of the Department of Radiology of Kansas University School of Medicine. Dr. Tice is now professor emeritus and he has spent many months in India as a visiting professor at the Christian Medical College. Dr. Tice spoke on the problems of medicine in India and illustrated his talk with a number of effective slides.

Diabetes Week
November 14-20

Beginning with the discovery of insulin, the techniques for controlling diabetes have undergone tremendous development. As a result, today millions of diabetics are living essentially normal lives, and among them are many outstandingly active and successful people.

There are in our present population approximately 1,600,000 "unknown" diabetics not yet receiving medical supervision. There are in addition 5,600,000 "potential" diabetics who will be the "unknowns" of tomorrow. There is a great opportunity to help millions of these persons through a concerted effort to detect every case of diabetes at the earliest stage.

The founders of the American Diabetes Association—now in its twenty-fifth year—felt from the beginning that public health education as well as professional education would be needed to raise the health status of diabetics. In 1948 the Association conducted its first national Diabetes Week. It was hoped that Diabetes Week would serve as the spearhead of a continuous diabetes detection drive, in which as many physicians as possible would participate.

Diabetes Week is now an established annual event which has become the spearhead of the year-round diabetes detection effort. The emphasis in 1966 will occur from November 14 to 20 when Diabetes Week is observed. The American Diabetes Association is offering information and material to physicians interested in conducting a Diabetes Detection Drive. The Association's address is 18 East 48th Street, New York, New York 10017.

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in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.
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(exempt narcotic)
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THE DOCTOR'S BUSINESS

No Load Funds Versus Load Funds

HOWARD D. BAKER
Waterloo

A great deal of discussion and writing has been done on this subject in the past. With a few *no load* funds starting to appear among the list of best performing investment funds, this load factor will require even more critical evaluation in the future.

In order to evaluate intelligently this *load* question, it is necessary to consider three basic loads or costs in connection with the acquisition, retention and disposition of investment fund shares.

(1) Acquisition Cost—*Front Load*

The majority of funds levy a charge for acquisition of their shares. This charge averages about 8 per cent of net asset value. The funds that levy this charge do not usually charge a redemption fee upon disposition of their shares.

(2) Management Fee—*Middle Load*

This is the fee that a fund pays the managing company. It is an annual fee based upon a percentage of asset value ranging all the way from one-quarter to 1½ per cent. This management cost varies so widely that over a 10-year period, many *load* funds collect less fees (including acquisition charges) than the so-called *no load* funds.

(3) Redemption Fee—*End Load*

This fee is almost standard among the *no loads,* but very few *load* funds make a charge for redemption of shares. The most common charge is 1 per cent of net asset value—a sizeable fee on a fund which has increased substantially in value over a period of years. The levying of this fee as a partial substitute for front load or acquisition charge tends to improve artificially the performance results of the *no loads.*

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

If you combine all three of these *load* factors for a 10-year period, many of the so-called *no load* funds are more costly to own than a load fund. To illustrate this principle, we have studied National Investors Corporation, a load fund, and DeVegh Mutual Fund, a no load fund. We have assumed an initial investment of $10,000 on January 1, 1956, reinvestment of all distributions and liquidation of the shares on December 31, 1965.

The investment in National Investors Corporation incurred an $850 load upon acquisition and $633 management fees over the 10-year period for a total of $1,483, or 14.8 per cent of the initial investment. The fund shares had a value of $23,394 on December 31, 1965 which would be the net liquidation value since there is no redemption fee for sale of shares.

The investment in DeVegh Mutual Fund was made without load charge, the 10-year management fee was about $1,380 and since DeVegh charges a redemption fee of 1 per cent of net asset value, the redemption fee would be $229. Total fees on this *no load* investment were 16.09 per cent of the initial investment. The fund had a total value of $22,916 on December 31, 1965 less the $229 redemption fee, or a net value of $22,687.

This brief comparison illustrates the fallacy in looking at load or *acquisition cost* as a determining factor in choosing an investment fund. In this particular case, the total fees over the 10-year period of ownership were 1.3 per cent higher on the *no load* fund than they were on the fund charging 8½ per cent.

It also illustrates the fallacy of choosing a fund even on the basis of *total fees* charged. On the basis of acquisition fee, you would choose DeVegh. On the basis of total fees, you would choose National Investors Corporation. This does not mean

(Continued on page 1163)

following infection

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Vitamin B_1 (as Thiamine Mononitrate)	10 mg
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Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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Iowa Association of Medical Assistants

Something to Talk About . . .

Talking about something . . . and doing something about it . . . are two different things. Members of the Iowa Association of Medical Assistants are happy to tell what they are doing, chapter-wise.

For instance, several chapters are helping to provide education for others.

The *Black Hawk County* chapter has collected and shipped 330 pounds of medical books and other educational material to Waterloo's sister city, Kangnung, South Korea. These books are for the library of the Provincial Hospital School of Nursing, which is in the process of upgrading its curriculum. The provincial authorities have agreed to build classrooms and a dormitory, but that is all. The school's goal is to build a library and equip it with 5,000 books.

Not only has the Black Hawk chapter helped with the building of the library, it also has donated money for the purpose of transporting a high school age boy from Kangnung to this country, so that he may attend high school in Waterloo.

The *Mason City chapter* has "adopted a child" in Bogota, Colombia. By providing a monthly grant the Medical Assistants of this chapter are making Marta Marroquin a happier, healthier little girl. She will have warm clothes and shoes to wear to school. Marta will learn through her foster parents about kindness and love from people far away; she will receive special medical care and encouragement and counsel as a result of the thoughtfulness of the Mason City Medical Assistants.

The *Linn County chapter* was able to award its first scholarship grant of $200 after a recent money raising project. The recipient this year has entered the Area-Vocational Licensed Practical Nursing

(Continued on page 1163)

Teachers in Kangnung, Korea, unpack books received from the Black Hawk Chapter of Medical Assistants.

The President of Linn County Chapter of Medical Assistants, Mrs. Geraldine Unangst, congratulates the recipient of the group's 1966 scholarship grant, Mrs. Reva McCray.

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Iowa Association of Medical Assistants

(Continued from page 1161)

School in Cedar Rapids. Applicants for this grant must be residents of Linn County. The members of the Linn County chapter expect to raise funds for a 1967 grant so they may help another worthy person pursue an educational program leading to a career as a nurse or medical assistant.

The *Sioux City chapter* has made contributions of food to the needy, realizing food for the body must precede food for the mind.

This enthusiasm and support for education deserves recognition. And it seems certain that more of the same can be expected in the future from the Iowa Association of Medical Assistants.

—MARIAN LITTLE

The Doctor's Business

(Continued from page 1159)

that DeVegh is an illogical commitment; on the basis of *net investment results*, it is still superior to 90 per cent of the funds sold today. To eliminate it from consideration because of high overall fees would be a mistake—just as the elimination of National Investors Corporation on the basis of its 8½ per cent acquisition cost would be in very bad judgment.

We have maintained for years that "net investment result" is the only valid basis for the choice of funds. This comparison is just another means of strengthening this premise and illustrating the general irrelevance of fees charged. In choosing a fund, the amount invested and the net liquidation value of the shares at any given time are the most significant factors. In the event of equal investment quality of two funds, fees charged would be of possible significance—but even then total fees should be considered, not just the *acquisition cost* of the shares.

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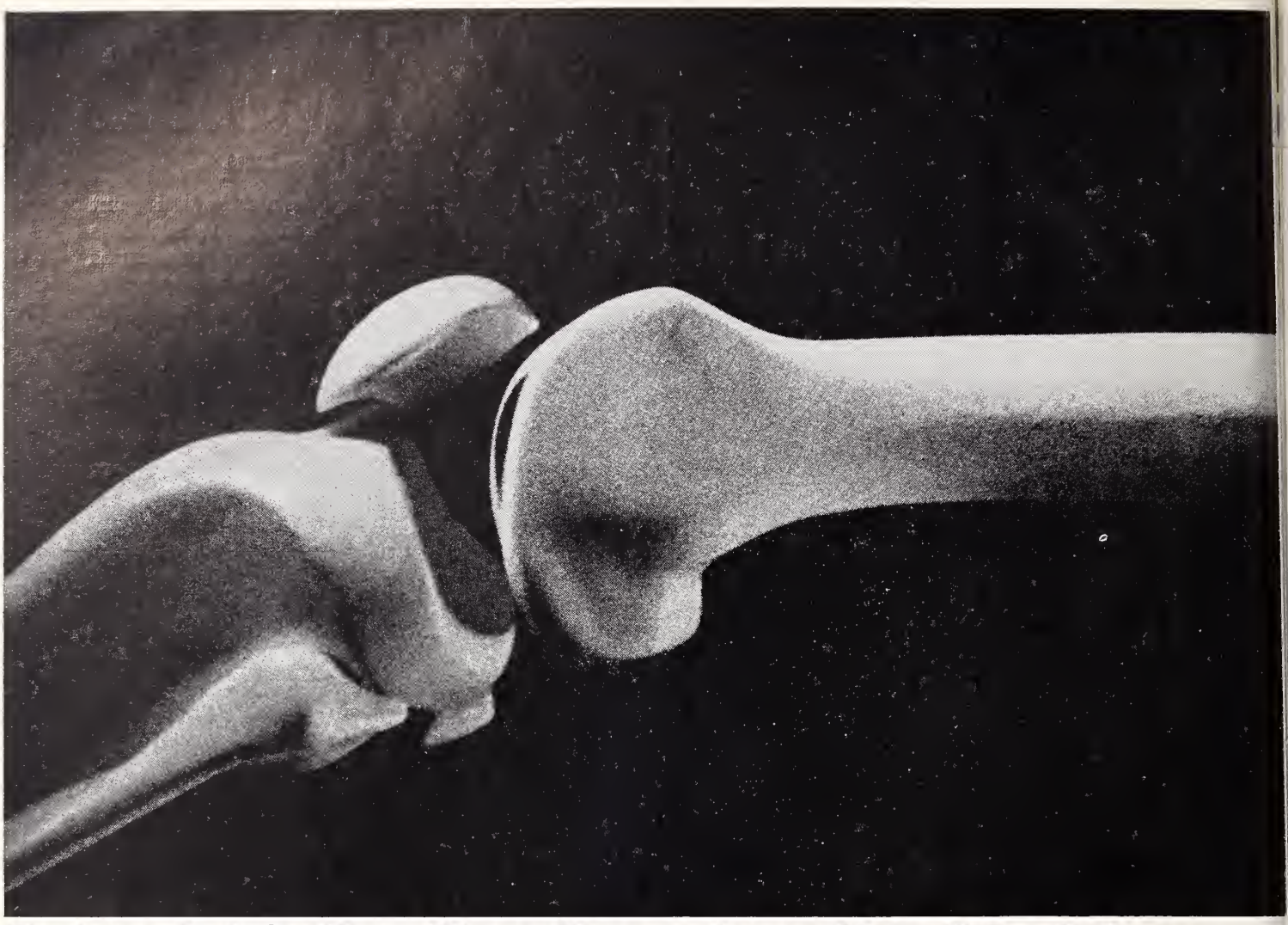

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Usually works within 3 to 4 days in osteoarthritis

The trial period need not exceed 1 week. In contrast, the recommended trial period for indomethacin is *at least 1 month.*

That's why it's logical to start therapy with Butazolidin alka—you'll know quickly whether or not it works. And usually, it will.

A large number of investigators have reported major improvement in about 75% of cases. Some patients have gone into remission. Relief of stiffness and pain may be followed quickly by improved function and resolution of other signs of inflammation. And Butazolidin alka is well tolerated, especially since it contains antacids and an antispasmodic to minimize gastric upset.

Contraindications
Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Use with caution in the first trimester of pregnancy.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information.
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STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Immunizations for Overseas Travel

The physician in his own office can do any of the immunizations required for overseas travel except yellow fever immunizations. Because of the great difficulty in maintaining a potent yellow fever vaccine, the vaccine is issued only to immunization centers set up with the special approval of the U. S. Public Health Service and state departments of health. Under these arrangements, Iowa's first yellow fever vaccination center was approved and set up in Iowa City in 1957. It continues to operate. To make the services more readily available to people in the central and western parts of the state, a second clinic has been set up in Des Moines and its first immunization was administered September 15, 1966.

SMALLPOX

Recommended before travel to any foreign country. A valid certificate of vaccination against smallpox is always required for entry into the United States from countries other than Canada and a few nearby places. The smallpox vaccination certificate is valid for a period of three years beginning eight days after the date of a successful primary vaccination or on the date of revaccination. Observe and record the reaction on the third and ninth days. If yellow fever inoculations are to be given, they should be given at least five days before smallpox is given.

CHOLERA

Start immunizations at least two to three weeks before leaving the United States. The standard course is two injections at seven to ten day intervals. A third injection is advisable. The cholera vaccination certificate is valid for a period of six months beginning six days after the first injection of the vaccine, or on the date of revaccination within such period of six months.

TYPHUS

Begin inoculations 2 to 3 weeks before leaving country. Standard course is 2 doses at a 7 to 10 day interval. While the certificate is valid for 1 year, a booster dose is recommended at 6 months if the danger of typhus is still present.

YELLOW FEVER

Give at least 10 days before leaving country. One injection is required. Certificate becomes valid on the eleventh day following the vaccination and remains so for 10 years. Travelers who, within 6 days of their arrival, have come from or passed through an area which is considered infected with yellow fever are required to present a valid certificate of vaccination against yellow fever.

TYPHOID

Should be taken by every person traveling abroad. Standard course is 2 injections at least four weeks apart. Boosters are recommended every 1 to 3 years.

DIPHTHERIA

Children under 15 who go abroad should be immunized against diphtheria. For travel in some areas of high diphtheria incidence, adults up to the age of 35 should be immunized. Due to severity of reaction of older persons to the alum precipitated materials, persons over 6 years should be given the purified diphtheria toxoid and not the alum precipitated toxoid.

INTERNATIONAL CERTIFICATES OF VACCINATION

These are usually received from the office to which the traveler makes application for passport. Passport applications are made through the office of the Clerk of a Federal Court or a State Court authorized by law to naturalize aliens. Information as to which immunizations are required for travel to any particular country can usually be obtained from the Passport Division of the offices listed in this paragraph.

STAMPS AND SEALS

These are required for smallpox and cholera vaccination certificates. After the physician's data have been entered, the certificate must be authenticated by any one of the following approved stamps or seals:

The stamp of state or local health departments of the area in which the vaccinating physician practices.

The stamp approved by the Public Health

Service and assigned to certain of its physicians.

The impression seal of the Public Health Service or the stamp of the Department of Defense.

The yellow fever immunization entry must bear the stamp of the yellow fever immunization center giving the injection.

Announcement of Policies Regarding Distribution of Gamma Globulin

Gamma Globulin Available for Distribution by the American Red Cross

In May 1966 the American National Red Cross announced to all state departments of health that due to limited supplies of gamma globulin, they have found it necessary, subsequent to July 1 of this year, to change their method of distribution of gamma globulin. Since July 1 there has been no free distribution of gamma globulin to state departments of health. However, arrangements have been set up by the Red Cross to include two categories under which free gamma globulin may be obtained from them. These are:

"The Red Cross will continue to make gamma globulin available without cost to physicians for their patients requiring long-term therapy. Until such time as an Ad Hoc Medical Committee can be convened to establish criteria for such patients, those being treated for agammaglobulinemia and dysgammaglobulinemia will be considered as requiring long-term therapy.

"The Red Cross will continue to provide gamma globulin without cost for disasters, epidemics and approved research. In addition gamma globulin will be available to appropriate Federal and State authorities at a reimbursement rate of 60 cents per ml. which will recover a portion of the cost to the Red Cross for processing the derivative."

Physicians requesting gamma globulin from the Red Cross for treatment for patients with agammaglobulinemia or dysgammaglobulinemia should, as they have been requested to do during the last couple of years, write directly to the Administrative Director, Blood Program, American Red Cross, Midwestern Area, 4050 Lindell Blvd., St. Louis, Missouri. In the letter of request they should give the following information regarding the patient or patients:

1. Name of patient and home address.

YELLOW FEVER IMMUNIZATION CENTERS IN THIS AREA

City	Address	Days	Telephone
Chicago, Illinois	U. S. Public Health Service Hospital, 4141 Clarendon Ave.	Monday & Friday 9:30 A.M. If Monday is a holiday inoculations are given on Tuesday; if Friday is a holiday, no inoculations are given until the following Monday.	LA 5-6340
Des Moines, Iowa	Des Moines-Polk County Health Department, 602 E. 1st St.	Thursday 2:30 P.M. If Thursday is a holiday inoculations are not given until the following Thursday.	283-2611, Ext. 265 (Write or call for app't in advance.)
(A FEE OF $3 IS CHARGED TO COVER COSTS OF VACCINE)			
Iowa City, Iowa	University of Iowa, Student Health Service	Wednesday 10:00 A.M. to 12:00 noon. If Wednesday is a holiday, no inoculations are given until the following Wednesday.	337-3111, Ext. 247 (Write or call for app't in advance).
(A FEE IS CHARGED TO COVER COSTS OF VACCINE)			
Minneapolis, Minnesota	Students Health Service University of Minnesota	Friday, 2:00 P.M. By appointment only.	FE 2-8158, Ext. 7361
Kansas City, Missouri	Trans-World Airlines, Inc. 10 Richards Road (Airport)	Tuesday and Thursday, 3:00-4:00 (except holidays, by appointment only).	GR 1-4400
St. Louis, Missouri	U. S. Public Health Service Outpatient Clinic, Federal Building, Room 2457	Thursday, 1:00 P.M.	MA 1-8100 Station 4851

The 6 stations listed above are the centers nearest Iowa. There is a total of over 120 yellow fever immunization centers in the United States. Many of these are located at marine hospitals and ports of embarkation. The Iowa State Department of Health can, at any time, furnish a complete list of these stations should the traveler find it inconvenient to obtain his required immunization at any of the stations named above.

2. A brief clinical history including age and weight of patient.
3. Pertinent laboratory data, including an electrophoretic analysis of the patient's serum in agammaglobulinemia or dysgammaglobulinemia.
4. The anticipated amount of gamma globulin needed for one year.

Distribution of Gamma Globulin by the State Department of Health

The State Department of Health has funds available to purchase gamma globulin to distribute to physicians. It will be necessary that they check closely the amounts needed in order to assure the best and most extended use of the supplies we will provide.

We can distribute gamma globulin to physicians only for *indigent* or *medical hardship persons* who have been directly exposed to known cases of infectious hepatitis, red measles or German measles. We believe that the amounts we shall be able to purchase will be adequate if we restrict distribution in the following manner.

1. For such persons exposed to *measles,* restrictions are further made to the extent that the persons should be children under 2, or older children who are suffering from some debilitating condition, such as rheumatic fever, diabetes or recent recovery from a severe illness.

We expect to continue distributing some gamma globulin for measles prevention and modification. The greatest amount used for this purpose can be expected to be in the group of youngsters under the age of 1 year. These youngsters are not usually given the measles vaccine. (Issue of gamma globulin for measles prevention or modification is not to be confused with use of gamma globulin to modify reactions with the Edmonston type of measles vaccine.)

DOSAGE: Prevention, 0.1 cc per pound of body weight.

2. Distribution is limited to very close or family contacts of a diagnosed case of *infectious hepatitis.*

There are no age restrictions for eligibility, as we know that the adult is more likely to have a severe case than the small child.

DOSAGE: We issue gamma globulin on a median range dosage basis with no less than 1 cc and no more than 3 cc to be given. We usually send 1½ cc for a youngster weighing 50 to 75 pounds, 2 cc for weights of 75 to 100 pounds, 2½ cc for weights up to 150 pounds and 3 cc for persons whose weights exceed 150 pounds.

3. For such persons exposed to *German measles,* distribution is limited to use for pregnant women in their first trimester of pregnancy.

DOSAGE: The majority of carefully studied research reports indicate dosages of less than 20 cc are likely to be ineffective. Recommended: 20 to 30 cc.

Supplies are no longer large enough to permit us to use the depot distribution system. We do, however, attempt to keep a small supply in our regional health offices. Physicians may procure the gamma globulin either from their regional health office or from us at the State Department of Health.

Morbidity Report for Month of September, 1966

Diseases	1966 Sept.	1966 Aug.	1965 Sept.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever ...	197	107	117	Bremer, Jefferson, Johnson
Typhoid fever ..	0	0	0	
Smallpox	0	0	0	
Measles	7	31	14	Scott
Whooping cough	6	3	5	Clayton
Brucellosis	4	7	6	Linn
Chickenpox	32	19	32	Clay, Scott
Meningococcal meningitis ...	0	1	2	
Mumps	37	31	30	Dubuque, Hardin, Scott
Poliomyelitis ...	0	0	2	
Infectious hepatitis	59	47	18	Black Hawk, Des Moines
Rabies in animals	11	11	15	For the state
Malaria	2	0	0	Johnson, Tama (acquired outside U. S.)
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis ...	24	11	25	For the state
Syphilis	93	84	54	For the state
Gonorrhea	214	248	204	For the state
Histoplasmosis .	1	0	3	Marshall
Food intoxication ..	0	0	6	
Meningitis (type unspec.)	0	3	2	
Diphtheria Carrier	0	0	0	
Aseptic meningitis ...	0	0	5	
Salmonellosis ..	10	12	13	Carroll, Dubuque, Polk
Tetanus	0	1	1	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	2	
H. influenzal meningitis ...	0	2	1	
Amebiasis	0	0	1	
Shigellosis	2	2	2	Johnson, Polk
Influenza	0	0	0	

Woman's Auxiliary News

From The President

Your President is again saying "Thanks" for a delightful trip; this time to the State of Kentucky. I went a day early so that I could spend an evening with my daughter who is a freshman at the University of Louisville. She was just barely settled but I was happy to see she plans to do more than advance her knowledge of horses; I must confess I think that was one reason for her selection of Louisville.

The Kentucky Auxiliary had a board meeting at 8:00 a.m. and the convention was called to order at 10:00 a.m. by the president, Mrs. Robert Salisbury. The chaplain gave the invocation which was followed by the Pledge of Allegiance to the Flag and the Pledge of Loyalty. The Memorial Service was most impressive—Clock of Life—and a candle was lighted for each member whose clock had run its course. The convention agenda followed the usual pattern and two awards were given, one "Helping Hands" award and one Legislation Appreciation Award. Frontier Nursing Service is one of their outstanding projects.

Following a delicious luncheon honoring the past presidents, members-at-large and their distinguished guests, Mrs. Raymond Jones, president-elect, presented the Membership Awards. "Busman's Holiday in Afghanistan" was an interesting program given by Dr. and Mrs. Charles C. Kissinger who had spent three months at a hospital in Afghanistan.

The highlight of the second day was the address by Mrs. Karl Ritter, president-elect of the Woman's Auxiliary to the AMA. She stressed team membership, career recruitment (we have recruited three million plus over the years), three special projects, Homemaker Service, Meals on Wheels and Volunteer Visitor Service; she will continue DIRECT LINE and MD'S WIFE and said our business is to mold positive public attitudes.

Dr. Baker, president of the KMA, brought the Auxiliary a message from its parent organization. He urged everyone to participate in community activities, to work diligently to increase the membership and improve the organization, especially at the local level.

The luncheon on the second day honored Mrs. Ritter and was followed by a Coat Style Show. It was hard to leave Kentucky's gracious hospitality and my daughter.

MRS. RALPH HINES, *President*

News From Around The Hawkeye State

Black Hawk County

There were 35 members present for the first meeting of the season of the Black Hawk County Medical Auxiliary. The dinner meeting was at the home of Mrs. George Murphy.

Mrs. Charlene Conklin, Republican candidate for state representative, spoke on the importance of IMPAC, the Iowa Medical Political Action Committee. Mrs. Gardner Phelps talked and showed slides on a visit she and Dr. Phelps made to Haiti. The Phelps were representatives of FOCUS, a medical service group. They treated people in Haiti who had ophthalmological disorders.

Boone County

The Woman's Auxiliary to the Boone County Medical Society entertained their husbands at a party September 17 at the home of Dr. and Mrs. John M. Wall. A social hour was followed by a buffet dinner.

Dr. and Mrs. J. R. Hill, newcomers to Boone, were welcomed as new members of the group. Special guests were the new administrator of the Boone County Hospital, Charles Linden, and Mrs. Linden. The remainder of the evening was enjoyed informally.

Cerro Gordo County

The first general meeting of the new season for the Cerro Gordo County Medical Auxiliary was held September 27 at the home of Mrs. Van Hunt. Mrs. George Tice, Auxiliary president, discussed the program for the year. Emphasis will be placed on the established program of assistance to the Future Nurses Club and other students interested in other health careers. The Auxiliary will also continue to provide volunteers to work at the Easter Seal Handicapped Workshop.

A meeting with Future Nurses Clubs from Mason City and Newman High Schools was held October 21 at the home of Mrs. Harold Brenton.

Old Gold Singers Highlight Annual Polk County Dinner

The Polk County Medical Auxiliary met jointly with the Polk County Medical Society September 28 for a dinner meeting at the Wakonda Club.

Following dinner, the meeting was called to order by Dr. Robert Stickler, president of the Polk County Medical Society.

Doctor Stickler welcomed all new members to the society. Mrs. Ralph E. Hines, president of the Woman's Auxiliary to the Iowa Medical Society, was congratulated for her service in that office.

Mrs. Olin A. Elliott, president of the Woman's Auxiliary to the Polk County Medical Society, thanked all of the doctors for an enjoyable evening. She also reviewed the highlights of the Auxiliary's projects for the coming year.

Entertainment for the evening was provided by the Old Gold Singers, a musical group from the University of Iowa. Mike Livingston directed the group as they presented musical selections from, "Guys and Dolls," "Mr. President," "Hello Dolly," "Funny Girl" and several others.

Mrs. Harlan K. Rosenberg was chairman of the event, and Mrs. Lawrence O. Ely was co-chairman.

Pottawattamie County

The Pottawattamie County Medical Auxiliary held its first meeting of the season at the home of Mrs. Maurice Margules, September 20.

Preceding the meeting an informal coffee hour was held. Mrs. Jose Martinez, president of the group, was co-hostess with Mrs. Margules.

Dates were set for two annual fund raising events. On March 21 a bridge luncheon will be held, and a rummage sale on April 3. The group also plans to have a luncheon in the spring honoring graduating nurses.

Volunteer Health Service Award

The county presidents, community service chairmen and members-at-large are requested to be on the lookout for a recipient of the *Volunteer Health Service Award.* Remember, candidates should not be members of a doctor's family; they should not be nurses, or anyone whose employment includes the particular service for which she is recognized. Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines, 50316, is chairman of this project. The recipient of this award will be presented at the state meeting in April 1967. Would all county presidents help us by getting started on this project now?

Essay Contest

Any interested county which has not received Essay Contest material is invited to contact Mrs. John Hess, 4619 Grand Avenue, Des Moines, 50312, for information. Mrs. Hess is state chairman. This is a most worthwhile project and helps to stimulate the interest of our youth groups in the field of medicine.

Beatitudes of Leaders

(Used by Mrs. Frances Hines to install the Polk County Auxiliary Officers, quite unique.)

Blessed is the Treasurer, the leader who guards the Treasury and we present you with this flower and white ribbon signifying complete truthfulness and honesty.

Blessed is the Corresponding Secretary, the leader who faithfully carries on the correspondence, we present this flower and pink ribbon signifying accuracy in transcription.

Blessed is the Recording Secretary, the leader who interprets correctly the action taken, we present this flower and red ribbon which signifies vigilance.

Blessed is the Second Vice President, the leader who urges each of you to attend meetings and encourages new members to join us, we present this flower and green ribbon which signifies faith and growth.

Blessed is the First Vice President, the leader who sets up such good programs that you just can't stay away, we present this flower and blue ribbon which signifies truth and wisdom.

Blessed is the President-Elect, the leader who watches, listens and stores the knowledge as a basis for her work next year, we present this flower and silver ribbon signifying patience and fortitude.

Blessed is the President, the leader who considers leadership an opportunity for harmonious service to all, we present this flower and gold ribbon signifying glory, unity, power and loyalty.

Do each of you now loyally pledge to fulfill your Bylaws duties and these Beatitudes?

I now declare the new officers of the Polk County Medical Auxiliary duly installed.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

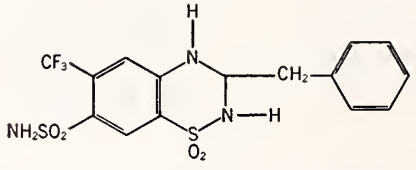
Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.



Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

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Personals

Dr. John L. Hoyt, of Creston, recently addressed a Rotary meeting in Creston. He talked about the growing pains and problems associated with Medicare.

Dr. Arthur P. Long, Iowa commissioner of health, has been appointed by Dr. William H. Stewart, U.S.P.H.S. surgeon general, to a four-year term on the National Advisory Health Council.

Dr. J. H. Hege, of Anamosa, was a recent guest speaker at meeting of Iowa City District Medical Assistants in Iowa City.

Dr. Robert G. German, of Marshalltown, has enlisted in the U. S. Navy for two years with the rank of lieutenant commander. Dr. German, a general practitioner in Marshalltown, is a graduate of U. of I. College of Medicine.

Drs. Charlotte Fisk, Beverly Robinson and **Madelene Donnelly,** all of Des Moines, attended a recent workshop on "Care of the Premature Infant" sponsored by the Harrison County Medical Society in Missouri Valley.

Dr. Amiram Carmone, of Hebrew University Hospital in Israel, spoke at the Hadassah luncheon at Sons of Jacob Synagogue in Waterloo. Dr. Carmone is a neurologist on the staff of the U. of I. College of Medicine. He will be in Iowa City for one year on a Hadassah Fellowship.

Dr. Dale Weber, of Clinton, was a recent guest speaker at the Lyons Club in the community of the same name. He told of his three months' experience assisting at the late Dr. Albert Schweitzer's jungle hospital in French Equatorial Africa as a senior medical student.

The 100th anniversary of the Iowa-Illinois Central District Medical Association will be observed November 16 in Moline, Ill. **Dr. Glenn D. Cunningham,** of Davenport, is president of the association. The association was founded November 7, 1866.

Dr. Howard Latourette, of Iowa City, was the principal speaker at the Henry County Cancer Society's annual meeting at Mt. Pleasant. Dr. Latourette is a professor in the Department of Radiology and Radiation Therapy at the U. of I. He is also a member of the State Board of Direc-

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tors of the Iowa Division, Inc., American Cancer Society. Dr. Latourette was introduced by **Dr. Richard A. Hastings,** of Ottumwa, state chairman of the Iowa Division.

Dr. Charles A. White, Jr., of Iowa City, recently presented a scientific paper at a district meeting in Omaha of the American College of Obstetricians and Gynecologists. Dr. White is an associate professor in the Obstetrics and Gynecology Department at the U. of I. College of Medicine.

Dr. Daniel A. Glomset, of Des Moines, chief of the internal medicine section at Iowa Methodist Hospital, was among the speakers at a recent Senior Citizens Conference held in Des Moines.

Dr. Fred Dinkler, of Des Moines, has been appointed associate medical director of Bankers Life Company. Dr. Dinkler was formerly with Great Southern Life. Prior to that he was in private practice in Sweetwater and Whitewright, Texas.

Dr. W. I. Evans, of Centerville, spoke recently at a meeting of the St. Joseph Hospital Auxiliary in Centerville. Dr. Evans described his work in the x-ray department at St. Joseph Hospital.

The guest speaker at a meeting of the Wapello County Medical Society was **Dr. Robert L. Jackson,** professor and chairman of the Department of Pediatrics at the University of Missouri. His topic was "The Child With Diabetes."

At the Oct. 13 meeting of the Linn County Medical Society, **Dr. Charles Theodore Dotter,** of Portland, Oregon, spoke on "Transluminal Treatment of Arteriosclerotic Occlusion." Dr. Dotter received a silver medal from the American Roentgen Ray Society in 1965, and in the same year an award for scientific achievement from the Oregon Heart Association.

Drs. Don E. Woodard, of Waterloo, and **Robert Kretzschmar,** of U. of I. College of Medicine, were initiated as members in the Central Association of Obstetricians and Gynecologists at a recent meeting in Biloxi, Miss. **Dr. William Keettel,** of Iowa City, is president of the Central Association, which includes 28 states.

Dr. Kenneth K. Hazlet, of Dubuque, recently presented a discussion on venereal disease control to the Parent Teacher Council of the Dubuque Community School System.

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Meprabamate: Careful supervisian af dase and amaunts prescribed is advised, especially far patients with knawn prapensity far taking excessive quantities af drugs. Excessive and pralanged use in susceptible persans, e.g. alcahalics, farmer addicts, and ather severe psychaneuratics, has been reparted ta result in dependence an the drug. Where excessive dasage has cantinued far weeks ar manths, reduce dasage gradually. Sudden withdrawal may precipitate recurrence af preexisting symptams such as anxiety, anarexia, ar insamnia; ar withdrawal reactians such as vamiting, ataxia, tremars, muscle twitching and, rarely, epileptifarm seizures. Shauld meprabamate cause drawsiness ar visual disturbances, reduce dasage and avaid operation af matar vehicles, machinery ar ather activity requiring alertness. Effects af excessive alcahal cansumptian may be increased by meprabamate. Apprapriate cautian is recammended with patients prane ta excessive drinking. In patients prane ta bath petit and grand mal epilepsy meprabamate may precipitate grand mal attacks. Prescribe cautiausly and in small quantities ta patients with suicidal tendencies.

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Meprabamate: Drawsiness may accur and can be assaciated with ataxia; the symptam can usually be cantralled by decreasing the dase, ar by cancamitant administratian af central stimulants. Allergic ar idiasyncratic reactians: maculapapular rash, acute nanthrambacytapenic purpura with petechiae, ecchymases, peripheral edema and fever, transient leukapenia. A case af fatal bullaus dermatitis, fallawing administratian af meprabamate and prednisalane, has been reparted. Hypersensitivity has praduced fever, fainting spells, angianeuratic edema, branchial spasms, hypatensive crises (1 fatal case), anuria, stamatitis, practitis (1 case), anaphylaxis, agranulacytasis and thrambacytapenic purpura, and a fatal instance af aplastic anemia, but anly when ather drugs knawn ta elicit these canditians were given cancamitantly. Fast EEG activity, usually after excessive dasage. Impairment af visual accammadatian. Massive averdasage may praduce drawsiness lethargy, stupar, ataxia, cama, shack, vasamatar and respiratary callapse.

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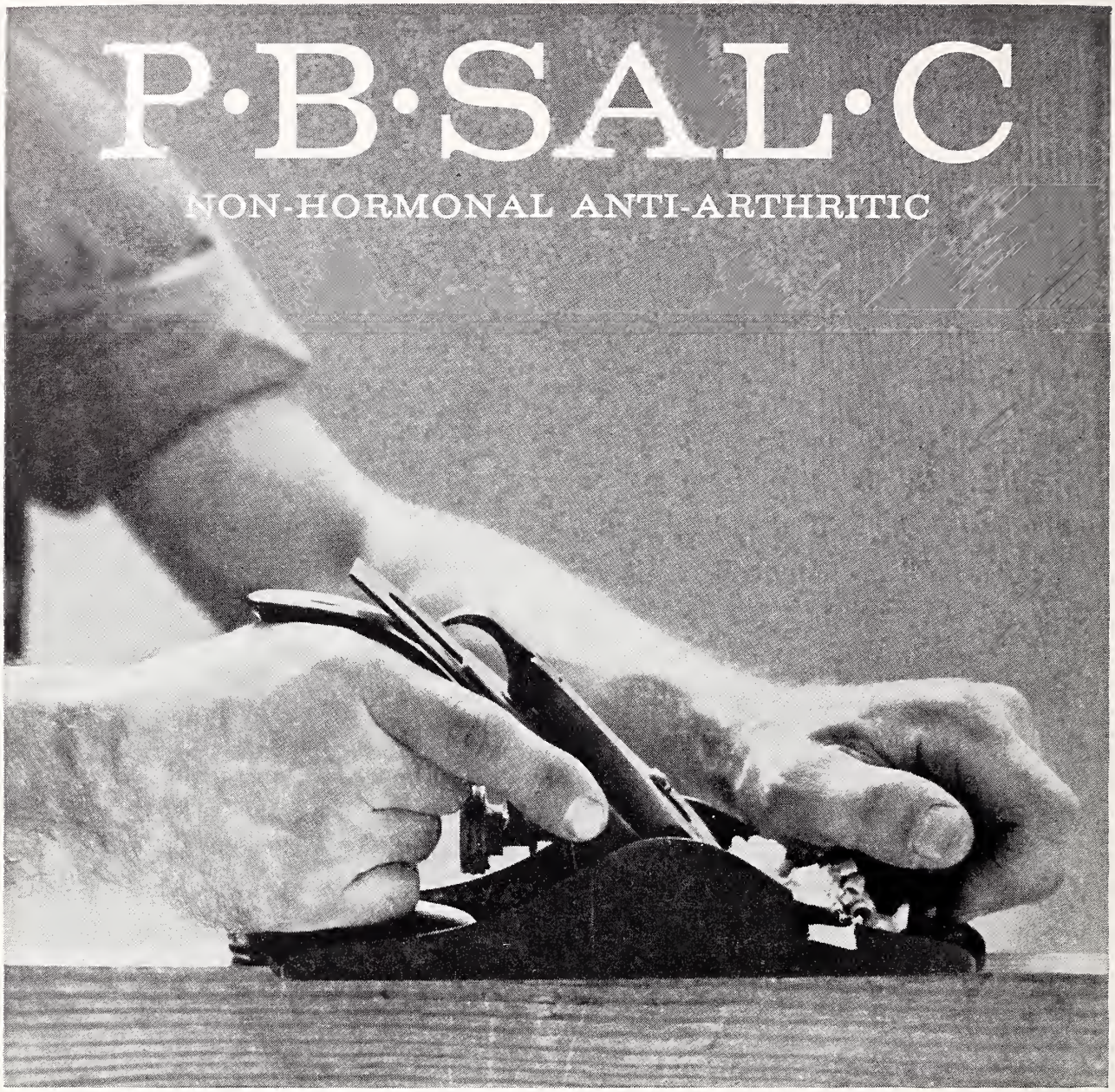

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Drs. Kazem Fathie, Cedar Rapids; **W. R. Meyer,** Clinton; **W. R. Hornaday, Jr.,** Des Moines; **E. J. DeLashmutt,** Ft. Madison; **D. W. Furnas, M. A. Immergut** and **N. P. Rossi,** Iowa City; and **L. B. Harned,** Waterloo, were awarded fellowships in the American College of Surgeons, at its 52nd Annual Clinical Congress in San Francisco, California, October 10-14.

Dr. Frederick C. Blodi, professor of ophthalmology at the U. of I. College of Medicine, was the guest speaker at the opening of a new eye laboratory at the University of California in San Francisco during September. He also served for a week as a visiting professor in the U. of C. Department of Ophthalmology. Dr. Blodi also is one of five ophthalmologists who have been appointed to an advisory panel for the new National Information Center for Vision being established at Harvard University.

Two papers from the Department of Anesthesia at the U. of I. College of Medicine were presented at the annual meeting of the American Society of Anesthesiologists in Philadelphia, Pa., Oct. 1-5. The papers were "Arterial Blood Oxygenation During Thoracotomies Using 30 Per Cent Oxygen and 70 Per Cent Nitrous Oxide," by **Drs. Azmy R. Boutros,** associate professor and **Mary Weisel,** assistant professor; and "The Relationship of Postoperative Atelectasis to Absence of Nitrogen in Respired Gases During Anesthesia in Patients With Chronic Obstructive Pulmonary Disease," by **Drs. Wendell C. Stevens,** assistant professor; **William K. Hamilton,** professor and head; **Donald L. Sweem,** resident physician; and **Larry Rigler,** Adair, Iowa junior in medicine.

Dean Robert C. Hardin of the U. of I. College of Medicine presented ideas about "Medical Education in 1970" at the fall clinical seminar of the Page County Medical Society. Also on the program were **Dr. Adrian Flatt,** of the Department of Orthopedic Surgery, **Dr. Hans Zellweger** of the Department of Pediatrics and **Dr. Sidney Ziffren** of the Department of Surgery, all from the U. of I.

Dr. and Mrs. Carol L. Plott, of Spirit Lake, left in September for Honolulu, Hawaii, where Dr. Plott attended an eight-day meeting of the Pan-Pacific Surgical Association.

Dr. Kris Kaboli has joined **Drs. J. L. Saar,** at Donnellson, and **John W. Saar,** at Keokuk, in the practice of medicine. Dr. Kaboli, formerly a resident of Canada, has had four years of postgraduate training in the U. S. He has completed two years of residency in Winnipeg, Canada.

Dr. A. S. Bowers, 88, of Orient, has retired from the practice of medicine. Dr. Bowers has served the town of Orient and surrounding area for 63 years. His responsibilities have included service as chief of staff at the Adair County Memorial Hospital. He resigned recently after serving for 43 years on the Adair County Board of Education, 31 of these years as president. Dr. Bowers plans to make his home in the South near his children.

Dr. Robert Linthacum, of Tama, was the main speaker at the first meeting of the year of Tama County Registered Nurses' Association. His lecture stressed the shortage of general practitioners in the United States and the need for more doctors in Tama County.

The National Institute of Neurological Diseases and Blindness has awarded **Dr. Rodney A. Anderson** a $7,000 fellowship for eye research at the University Hospitals in Iowa City. Dr. Anderson, until recently, was a flight surgeon at Scott Air Force Base, Illinois.

A research grant of $5,000 from the Muscular Dystrophy Associations of America has been awarded to **Byron A. Schottelius,** associate professor of physiology at U. of I. College of Medicine. The semi-annual award will finance the first phase of a 1967 research program being directed by Dr. Schottelius and supported by MDAA. Dr. Schottelius' continuing research concerns the biophysics of dystrophic contraction. Nearly $110,000 has now been provided by MDAA for research by Dr. Schottelius over the past 11 years. MDAA, which receives its funds from voluntary contributions, now allocates almost $4 million annually for research. MDAA also offers a variety of services to persons with muscular dystrophy, including provision for wheel chairs and various orthopedic appliances, maintaining recreation programs for children and adults, and financing therapy for patients.

Dr. Lewis E. January, professor in the College of Medicine at the U. of I., was the main speaker at the October meeting of the Johnson County Medical Society held at the University Athletic Club in Iowa City. His topic: "The Role of Voluntary Health Agencies in Expanding Government Programs."

A scientific exhibit from The University of Iowa College of Medicine won the top award this week from the American Academy of Ophthalmology

and Otolaryngology. The same exhibit won the second place silver medal Hektoen Award at the annual meeting of the American Medical Association in June. Title of the display is "Stereoscopic Fluorescence Angiography of the Ocular Fundus in Local and Systemic Diseases."

The display illustrates the diagnostic uses of stereo photo techniques, developed at the U. of I. Medical Center, and fluorescein injections. Fluorescein is a dye that makes the blood vessels in the eye fluoresce under ultraviolet light.

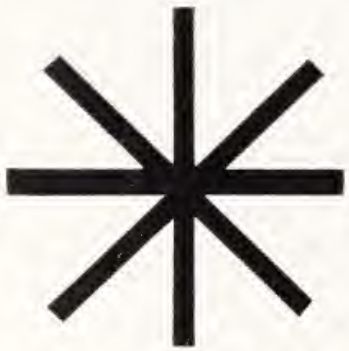
Participating in developing the exhibit were **Dr. William B. Snyder,** an assistant professor of ophthalmology; **Dr. Walter M. Kirkendall,** a professor of internal medicine and head of the Cardiovascular Research Laboratories; **Dr. Joseph T. Leinfelder,** a resident physician in ophthalmology; **Edwin Lee Allen**, an associate in ophthalmology; and **Ogden Frazier,** a photographer in ophthalmology.

Dr. William H. Olin, a professor of otolaryngology and maxillofacial surgery at the U. of I., has been invited to be a visiting professor in Japan during the first two weeks of November. Dr. Olin will participate in teaching sessions and give lectures on cleft palate and facial deformities for members of the Japanese Society of Plastic Surgeons, the Osaka Medical Society, and at the Osaka University Dental School.

Five papers co-authored by thirteen staff members from The University of Iowa are being presented at meetings of the American Heart Association and the American Society for the Study of Arteriosclerosis being held Wednesday and Thursday (Oct. 19-20), in New York City.

A paper titled, "Persistence of Cholesterol-4-C^{14} in Atherosclerotic Aortas of Animals Treated With a Diet High in Polyunsaturated Fat," was co-authored by **Drs. William E. Connor** and **Mark L. Armstrong,** associate professors of internal medicine, and **Carl S. Jackson** and **M. Amir Ali,** research assistants in internal medicine. The paper will be presented to the American Society for the Study of Arteriosclerosis.

The following four papers will be part of the American Heart Association program. "Effects of Triiodothyronine on the Hemodynamic Responses to Norepinephrine in Man" co-authored by **Drs. Ernest O. Theilen,** a professor of internal medicine; **William E. Connor,** an associate professor of



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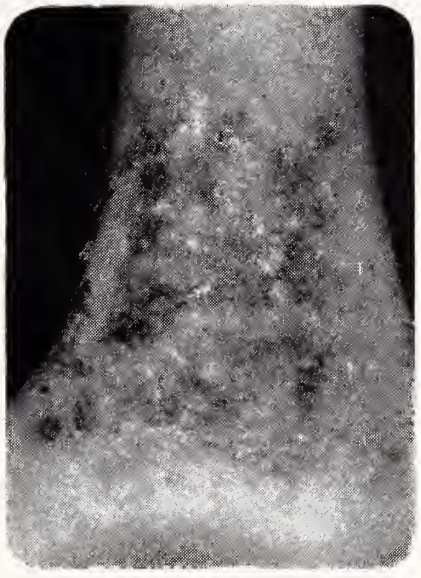
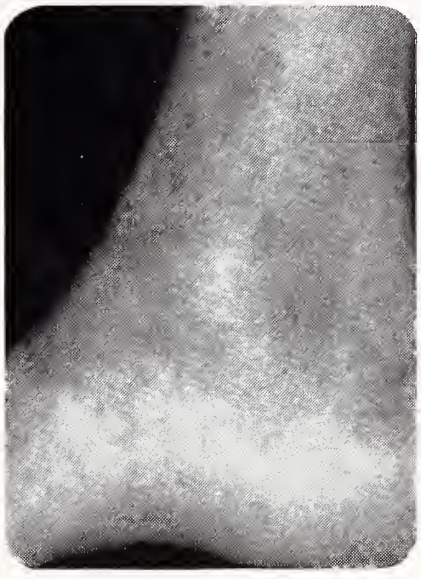


R. R., Age 11—Before treatment—atopic eczema of long standing



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'ministration and Dosage: Apply sparingly to the affected ea 3 or 4 times daily. Some cases of psoriasis may be more ectively treated if the 0.1% Cream or Ointment is applied der an occlusive dressing.

ntraindications: Tuberculosis of the skin, herpes simplex, icken pox and vaccinia.

ecautions and Side Effects: Do not use in the eyes or in e ear (if drum is perforated). A few individuals react unvorably under certain conditions. If side effects are enuntered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Packages: Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

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internal medicine and pharmacology; and **Vincent S. Aoki,** an internal medicine trainee.

"Effect of Phenoxybenzamine on Increases in Precapillary and Postcapillary Resistance During Adrenergic Stimulation" and "Comparison of the Effects of Several Sympathomimetic Amines on Resistance and Capacitance Vessels in the Forearm of Man," were co-authored by **Drs. John W. Eckstein,** a professor of internal medicine; **Francois M. Abboud,** an associate professor of internal medicine; and **Phillip G. Schmid,** a former postdoctoral research fellow now in the Air Force Medical Corps.

"Cardiac Adaptations of Trained Hypophysectomized Rats," was co-authored by **Dr. Charles M. Tipton,** an assistant professor of physiology and biophysics and physical education for men; **Roy J. Bernard,** a research assistant, and **Tse K. Tcheng,** a research associate in physical education for men.

Seventeen new appointments to the U. of I. College of Medicine include one professor, fifteen assistant professors, and one associate professor.

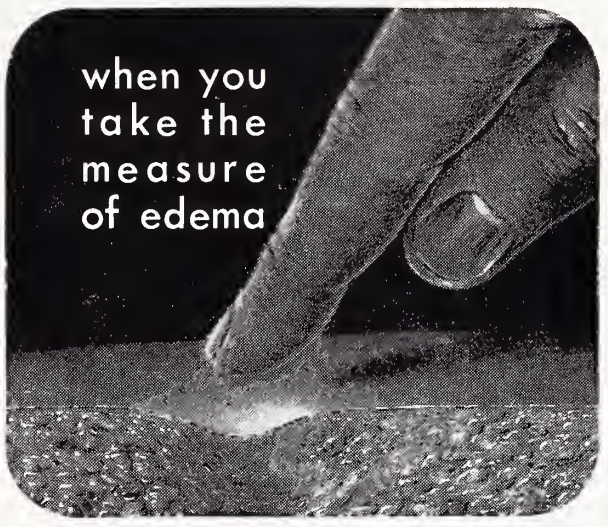
Dr. William O. Rieke, who has been appointed professor and head of anatomy, received his M.D. degree at the University of Washington School of Medicine, Seattle, and afterward served as administrative officer and associate professor in the Department of Biological Structure at the same school. Three graduating classes there selected him from the faculty in the preclinical sciences to receive the "Medical Teacher Honors" award.

Dr. Glenn D. Jacobsen, who was named an assistant professor of anatomy, received his M.A. and Ph.D. degrees from the University of North Dakota, and subsequently served as a professor of anatomy there. Dr. Jacobsen served briefly as an assistant professor at the University of Missouri early this year.

Dr. Walter H. Mason, who has been made an assistant professor of preventive medicine and environmental health, received M.S. and Ph.D. degrees in pharmacology from West Virginia University. He was a post doctoral fellow on an NIH Training Grant at Tulane University before coming here.

Dr. James Robert Leonard, who has been named assistant professor of otolaryngology and maxillofacial surgery, received his M.D. degree from the Medical College of Virginia in 1959, and served a residency at Johns Hopkins Hospital.

Dr. Thomas Ellsworth Layman, a new assistant professor of internal medicine, received his M.D. degree from the University of Illinois College of Medicine, served a residency at the Minneapolis Veterans Administration Hospital, and later held a fellowship in cardiology at the University of Minnesota Hospitals and a research post in pathology at the Charles T. Miller Hospital, in St. Paul.



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DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur.

Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

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Dr. Gilbert Frank, an associate professor of psychiatry and neurology, received his M.D. degree from the University of Minnesota Medical School, served his residency there and served as an instructor for a year. Thereafter he subsequently was an assistant professor of neurology and director of the EEG Laboratory at the Stanford University School of Medicine in Palo Alto, Calif.

Dr. Rafig Waziri, appointed an assistant professor of psychiatry, has been in this country for five years on an exchange visa and is seeking an extension for two years of work at the U. of I. He hopes to return to Afghanistan to assume a medical school post. He received his M.D. degree from the medical school at the American University in Beirut, Lebanon. Dr. Waziri has been an instructor in the Department of Physiology and Biophysics at New York University Medical School the past two years.

Dr. Donald P. Stahly, an assistant professor of microbiology, received his M.S. degree in microbiology from Ohio State University, and his Ph.D. degree from the University of Illinois last year. He has since been in the laboratory of **Dr. Robert W. Bernlohr,** at the University of Minnesota, where he held an NIH postdoctoral fellowship.

Dr. James C. N. Brown, an assistant professor of psychiatry, received a medical degree from the National University of Ireland, in Cork. After serving a residency in psychiatry and electroencephalography at the U. of I., he became psychiatrist and electroencephalographer, and director of the Out-Patient Department, last year, at the Clarinda Mental Health Institute.

Dr. Charles V. Anderson, a new assistant professor of otolaryngology and maxillofacial surgery, received his M.A. degree in speech pathology and audiology from the University of Nebraska and his Ph.D. degree in audiology from the University of Pittsburgh. He later served as an assistant professor in the Department of Audiology and Speech Sciences at Purdue University.

Dr. Thomas H. Kent has joined the faculty as assistant professor of pathology. While earning a B.A. degree at the U. of I., he was named to Phi Beta Kappa. Dr. Kent also received his M.D. degree at the U. of I. During Army duty he was stationed at the Walter Reed Army Institute of Research.

Dr. Bruce Eldon Spivey, an assistant professor of ophthalmology, received his B.A. degree from Coe College and his M.D. degree from the U. of I. He completed a residency in ophthalmology at the U. of I. before serving with the Army.

Dr. William C. Fritsch, an assistant professor of dermatology, received an M.D. degree from the University of Chicago, served a residency in dermatology at Western Reserve University, in Cleveland, Ohio, and has been in the Air Force for the last two years. He will be in charge of all

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dermatology laboratory research at the U. of I., besides participating in patient care.

Dr. Sidney S. Kripke, who was appointed assistant professor of pediatrics and assistant director of the State Services for Crippled Children, received both his A.B. and M.D. degrees from the University of Michigan. He engaged in private practice for three years before joining the Pediatric Tuberculosis Clinic of the Colorado Department of Health and Hospitals, in Denver.

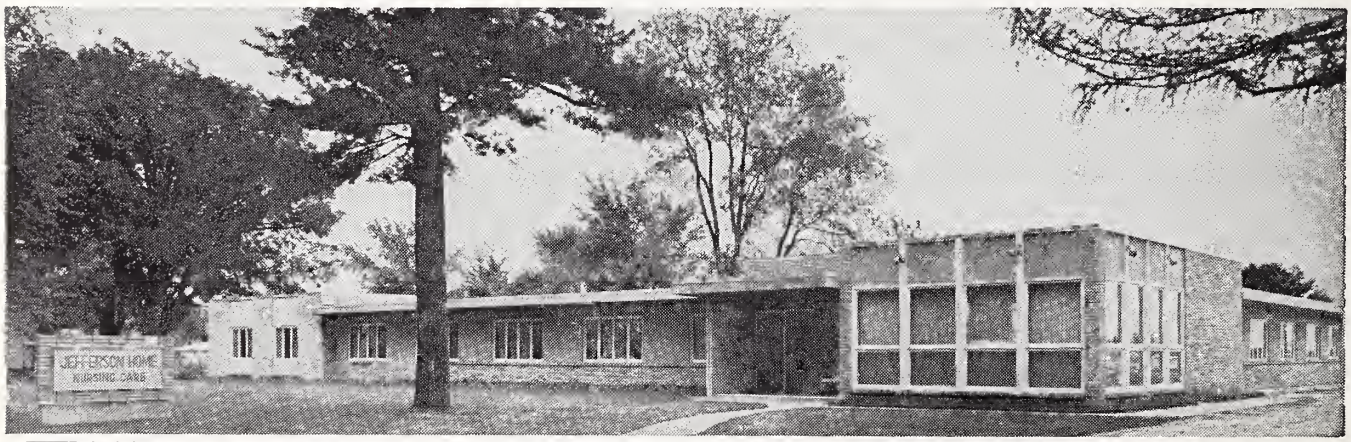
Dr. Jane E. Anderson, an assistant professor of pediatrics, received her A.B. degree from DePauw University and her M.S. and Ph.D. degrees in psychology from Purdue University. After serving as staff psychologist for the Speech and Hearing Clinic at Purdue University, she became an NIH postdoctoral fellow in clinical psychology at the Judge Baker Guidance Center, Boston, last year.

Dr. Lawrence Den Besten, an assistant professor of surgery, received his B.A. degree from Calvin College and his M.D. degree from the U. of I. He later joined the staff of Tokum Christian Hospital, in North Nigeria, West Africa. After returning to this country and completing a surgical residency at the U. of I., he joined the staff of the Mkar Hospital, in North Nigeria.

Dr. Frederick L. Benoit III, an assistant professor of radiology and internal medicine, received a B.S. degree from Seattle University and an M.D. degree from the University of Washington. He has since served a residency in internal medicine, as head of an endocrinology clinic, and has been director of the Clinical Investigation Center at the Naval Hospital in Oakland, Calif. In 1964, he was head of the Experimental Medicine Division in the Clinical Investigation Department of the Naval Medical Research Institute in Bethesda, Md.

Dr. Richard Corton, of Waterloo, spoke on the subject of respiratory diseases at a September luncheon meeting of the Waterloo Christian Women's Club.

Dr. Edward R. Posner, Jr., of Des Moines, is retiring from the private practice of medicine on December 1, 1966. He will devote a greater amount of time to the educational program of the house staff at Broadlawns Polk County Hospital, where for the past three years he has been associated with the U. of I. College of Medicine as a clinical



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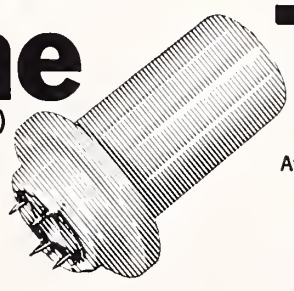

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assistant professor of internal medicine. He will also serve as a consultant to the Veterans Administration and the Division of Vocational Rehabilitation of the State of Iowa.

The following are recent physician participants and their topics on the radio program "Doctor's House Call," broadcast over WOI, Ames: **Dr. M. E. Yannone,** Iowa City, "Diabetes in Pregnancy," September 7; **Dr. C. R. Peterson,** Des Moines, "Pain," September 14; **Dr. F. D. Lawson,** Fort Dodge, "Radiation Hazards," September 21; **Dr. Walter M. Block,** Cedar Rapids, "Common Misbeliefs in Pediatrics," September 28.

Dr. Hans Zellweger, of Iowa City, professor of pediatrics at the U. of I. College of Medicine, spoke at the International Symposium on Genetics at the University of Alabama, during August. Dr. Zellweger spoke on the use of chromosomal analysis in Mongolism. The symposium preceded the International Congress of Genetics which was held in Chicago the first week in September.

Dr. Samuel D. Porter, son of Dr. and Mrs. S. D. Porter, of Grinnell, has been awarded a clinical fellowship at the U. of I. College of Medicine by the American Cancer Society. Dr. Porter, of Iowa City, was in Grinnell recently to present a talk.

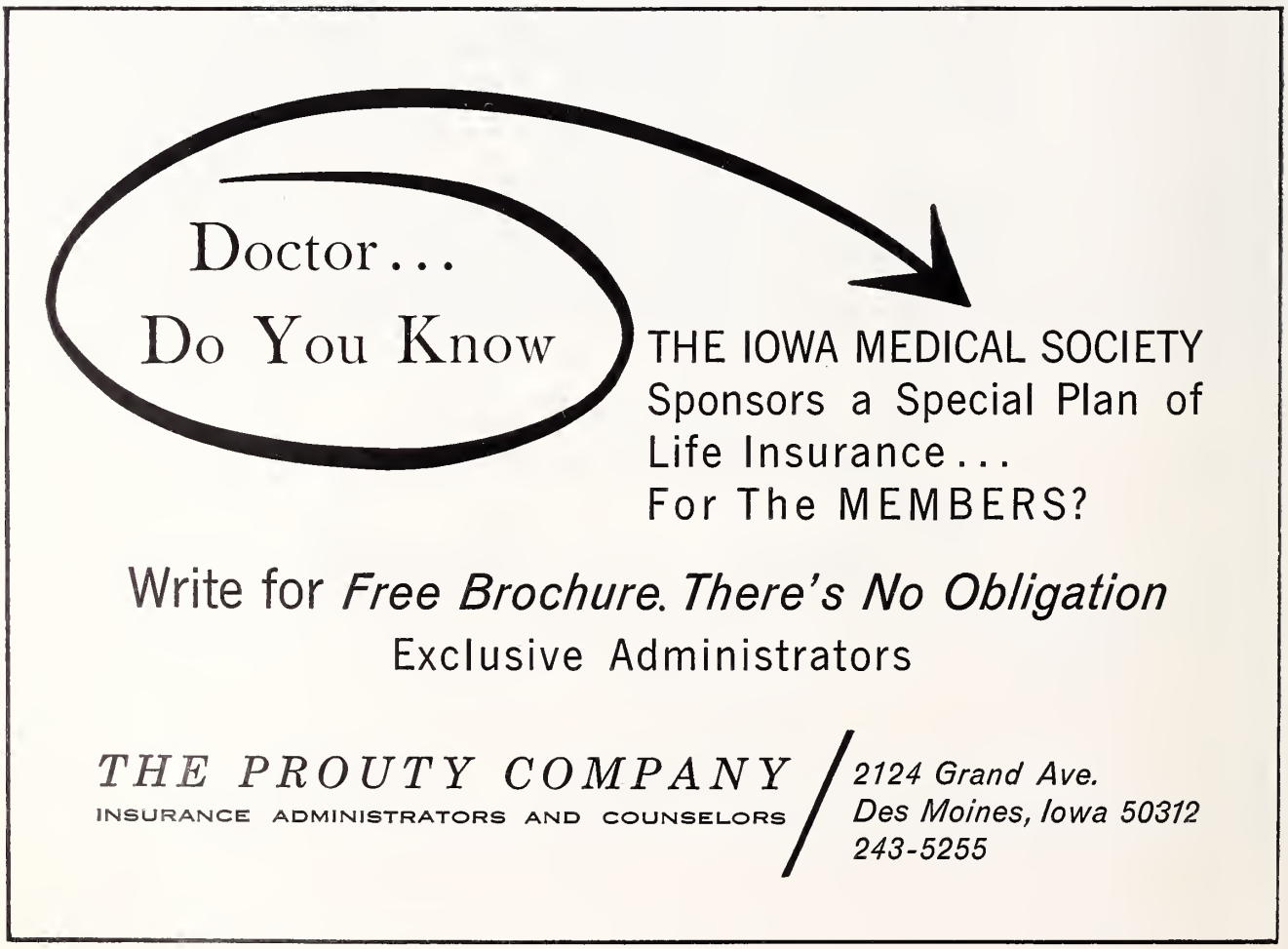
Dr. Howard B. Latourette, of Iowa City, professor in the department of radiology and radiation therapy at the U. of I. College of Medicine, was the guest speaker at the October meeting of Burlington Executives Club. He spoke on recent developments in the war against cancer.

Deaths

Dr. Henry W. Clasen, 94, of Cedar Falls, died September 21, at Littleton, Colorado, where he had been living with his son-in-law and daughter, Dr. and Mrs. E. C. Claus. He practiced medicine in Tripoli, Denison, Dike and Cedar Falls until his retirement 10 years ago.

Dr. H. A. Housholder, 83, of Winthrop, died September 21, at People's Hospital in Independence. He had practiced medicine for 60 years before his retirement about five years ago. Dr. Householder graduated from the U. of I. College of Medicine in 1905.

Dr. L. P. Adams, of Long Beach, Calif., died September 22, after suffering a heart attack. Dr. Adams practiced medicine in Newton for 17 years where he was associated with Dr. E. A. McMurray. He was a graduate of the University of Minnesota School of Medicine.



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GENERAL PRACTITIONER NEEDED: Practice with complete freedom of action in a rural atmosphere? Office next to pharmacy, ready for occupancy, no unseen strings. Moville, Iowa, 15 miles east of Sioux City offers just such a chance. Contact Moville Community Development Association, Inc., Moville, Iowa.

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GENERAL PRACTITIONER WANTED by group of three in north-central town of 30,000. Attractive community with excellent urban and rural balance; two excellent hospitals; fine schools and diversified churches. Time available for attendance at medical meetings, vacation. Rotation of work throughout the week. Salary and percentage to start; then a percentage partnership. Information confidential. Write No. 1341, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines 50265.

GENERAL PRACTITIONER needed to replace physician who died suddenly at 49 years of age, after practicing 17 years in the community. Northwest Iowa town with population of 900 has 46 retail merchants. Deceased physician's office is modern; 33-bed nursing home, containing treatment room, will open in September; new hospital under construction 12 miles away. Address John M. Rhodes, M.D., Pocahontas, Iowa 50574.

BATTLE CREEK, IOWA urgently in need of General Practitioner. Municipal hospital. Five year old clinic building available. Contact Robert Brock, Secretary, Citizens Committee, Battle Creek, Iowa, for brochure and information.

GENERAL SURGEON seeks Iowa location. Eligible for Board December 1966, foreign graduate, 38 years old, married, Catholic. Possess active Iowa license. Prefer solo practice but will consider all offers. Available January 1, 1967. Address: No. 1390, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines 50265.

WANTED: Dedicated general practitioner to take over my practice. An unusual opportunity. Home and office reasonable. Write R. L. Knipfer, M.D., Jesup, Iowa.

GENERAL PRACTITIONER wanted to join clinic group located in excellent Northeast Iowa City. New clinic facilities. Excellent group and future unlimited. Three excellent hospitals. Above average partnership arrangement available after two years employment. Address: No. 1391, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines, Iowa 50265.

WANTED: Internist, board eligible or certified, in a very busy group in a Northeastern Iowa city. Operation in new and complete clinic facilities. Three excellent hospitals. Exceptional partnership arrangement after two years employment. This opportunity presents a great future for an aggressive man. Address: No. 1392, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines, Iowa 50265.

OBSTETRICIAN-GYNECOLOGIST wants location. 30 year old University of Iowa graduate who took university residency training. Passed part I of board exams July, 1966, and will be eligible to take part II in twelve months. Address: No. 1394, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

FOR SALE: Sanborn Portable Electrocardiograph Instrument, Model 300, purchased late in 1963. Used infrequently for 15 months. Not used at all since May, 1965. Essentially as good as when purchased, $325. Write No. 1393, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines, Iowa 50265.

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- Indications for Chromosomal Analysis in Mongolism—Hans Zellweger, M.D.
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- Summary of 1966 Iowa Medical Society Fall Conference

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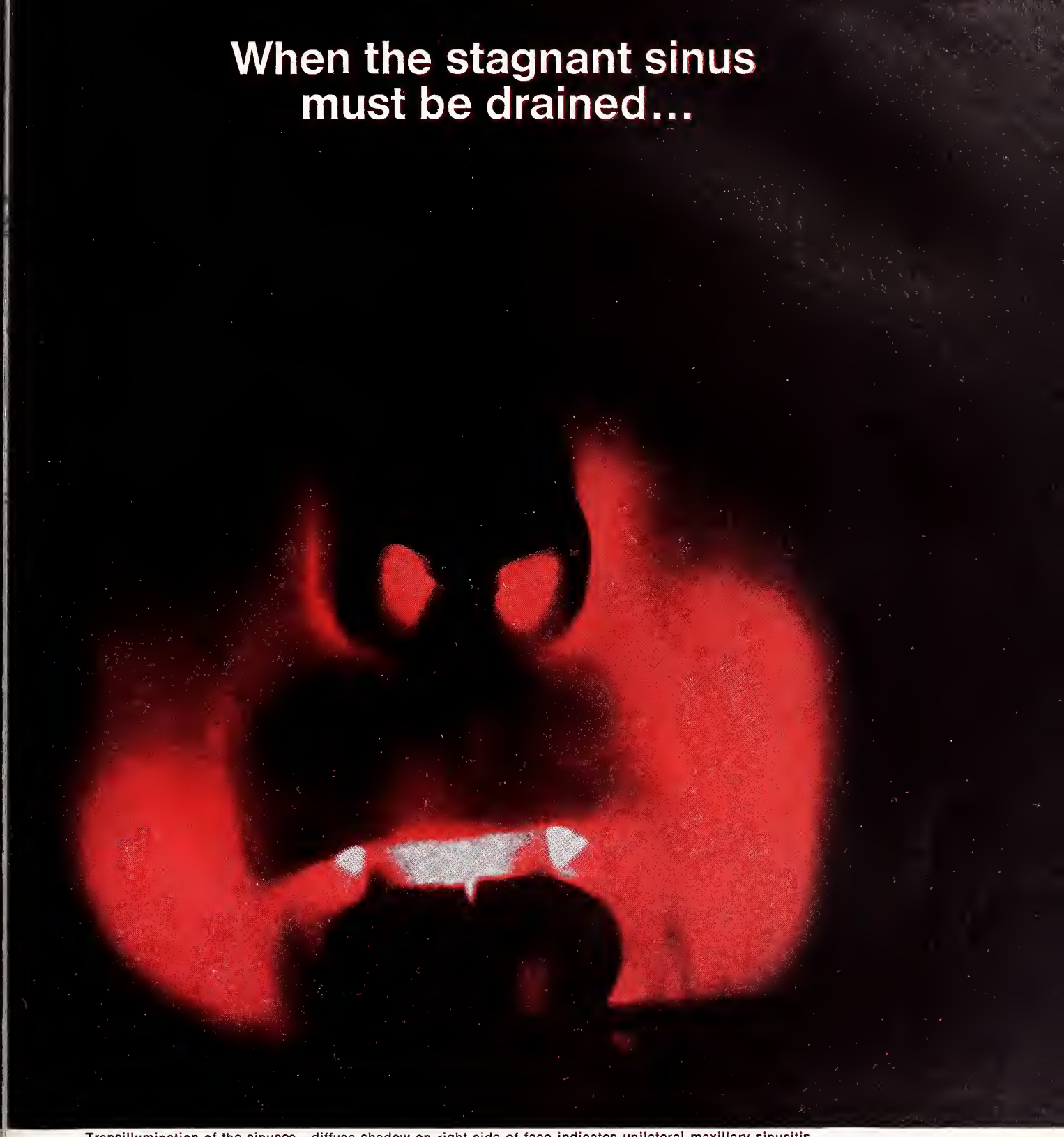
When the stagnant sinus must be drained...



Transillumination of the sinuses—diffuse shadow on right side of face indicates unilateral maxillary sinusitis.

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The Month in Washington

Washington, D. C.—High on the list of health legislation to be considered by the new Congress convening Jan. 10 are proposals to amend both the medicare and the medicaid programs. Proposed medicare amendments would extend the program to the disabled, would include podiatrists' services, would add out-patient drugs to Plan B, and would authorize that billing for services of hospital-based physician specialists be put back under hospitals.

Sen. Russell B. Long (D., La.), chairman of the Senate Finance Committee, which handles medicare and medicaid legislation, is pushing a proposal designed to get physicians to prescribe drugs by generic terms for those of their patients who are under federally-aided medical programs. Such an amendment died in a conference committee in the final days of the last Congress.

Amendments to limit federal expenditures under medicaid (Title XIX) are expected to get early consideration by the House Ways and Means Committee. The Committee reached agreement on such legislation shortly before adjournment last session, but it was too late to get it through Congress.

One of the final pieces of legislation passed by Congress in 1966 authorized liberalization of the Keogh Law, under which the self-employed get a tax break for savings put into qualified pension plans. The full amount of the $2,500 annual maximum was made tax-deductible. Only half of the amount was tax-deductible under the original law.

Other health legislation approved by Congress in 1966 included:

Group practice—authorizes federal mortgage guarantees for construction of non-profit group practice facilities.

Health services—authorizes the Office of Economic Opportunity (anti-poverty) to make grants for comprehensive health services programs, including birth control.

Public health—authorizes (1) $145 million, one-year extension of PHS programs, including $125 million for project grants for categorical programs. States and the PHS are given greater flexibility in spending the money among the various categories and including other "public health" projects; (2) extends the federal-aid vaccination program for three years; (3) provides for family health services for migratory workers.

Air pollution—authorizes a three-year, $186 million extension of the federal anti-air pollution program and provides broader authority for air pollution control activities by localities.

Water pollution—authorizes a $3.7 billion, four-year program for cleaning the nation's waterways. It includes initiation of a massive program for combatting pollution in major water basins.

Child care—prohibits sale of toys containing hazardous substances and strengthens existing law covering household hazardous substances; does not contain a disputed provision covering children's aspirin and other drug controls that were in the original proposal.

Narcotics—permits addicts charged with non-violent crimes to choose hospital commitment instead of trial, if the authorities agree, or could be sentenced after trial to hospitals for rehabilitation.

Packaging—requires that over-the-counter drugs and grocery products bear labels clearly showing the contents, quantity, and manufacturer.

Mental health—amends original law to provide grants to assist in the establishment and initial operation of community mental health centers.

Research laboratory animals—provides for federal regulations covering transportation, purchase, sale, housing, care, handling and treatment of such animals.

Military medicare—amends existing law to provide for out-patient care in a physician's office and to include retired reservists and their dependents.

Allied health professions—authorizes $105 million for a three-year program to train more medical technicians, therapists and other allied health workers.

The federal government has launched an extensive program to control and prevent alcoholism.

As initial steps, Health, Education and Welfare Director John W. Gardner established a National Center for the Prevention and Control of Alcoholism and appointed an 18-member National Advisory Committee on Alcoholism.

In announcing the program, Mr. Gardner stated its two major aims:

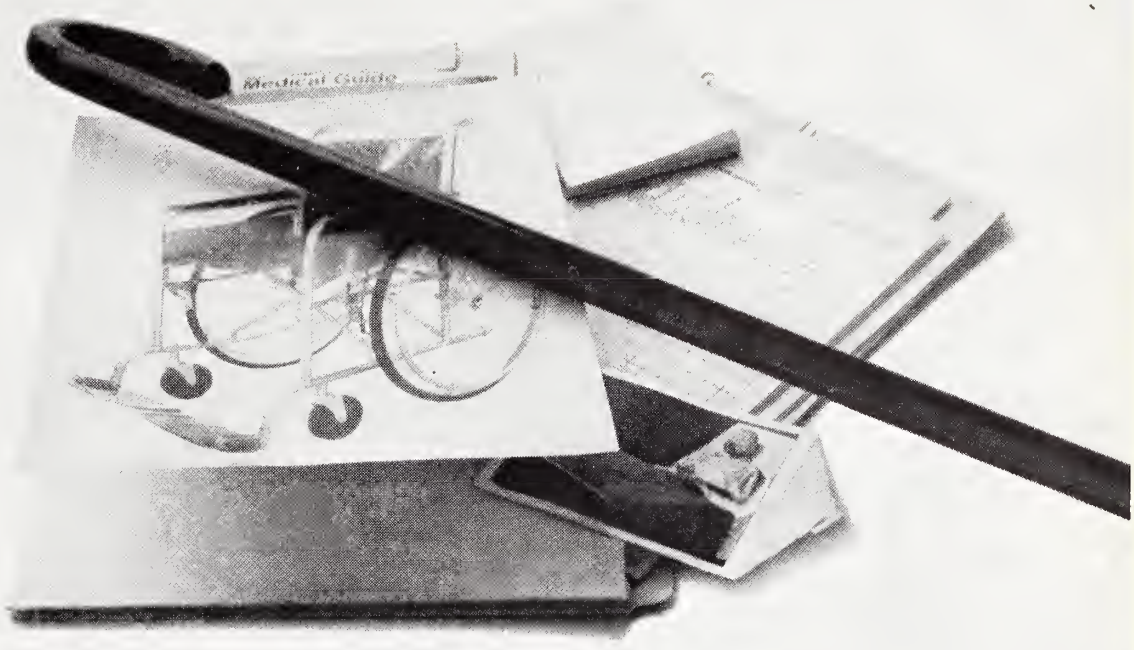
(1) The immediate goal of making the best treatment and rehabilitation services available to those who need them now—through both the stimulation of existing resources and the development of new manpower and facilities.

(2) The long-range goal of developing effective, practical, and acceptable methods of preventing alcoholism and excessive drinking in all their destructive forms and developing improved therapeutic technics.

Milton Silverman, special assistant to the HEW Assistant Secretary for Health and Scientific Affairs, was named coordinator of the program and executive secretary of the advisory committee.

The National Center will be active in a num-

(Continued on page 1255)



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Vitamin B_6 (Pyridoxine HCl)	2 mg
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†The need for these substances in human nutrition has not been established.

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Coming Meetings

IN STATE

Dec. 9	**Cardiac and Respiratory Disease Conference,** University of Iowa College of Medicine, Iowa City.
Jan. 17-18	**Postgraduate Course on Obstetrics and Gynecology,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Dec. 7	**Symposium on Management of the Chronic Disease Patient,** Mount Sinai Hospital Medical Center, Chicago.
Dec. 7-8	**Conference on Current Concepts in Arthritis,** University of Missouri Medical Center, Medical Center Auditorium, Columbia.
Dec. 8	**American College of Physicians Texas Regional Meeting,** Houston.
Dec. 8-10	**American College of Physicians North Carolina Regional Meeting,** Charlotte.
Dec. 9-10	**American College of Physicians New Mexico Regional Meeting,** Albuquerque.
Dec. 10	**American College of Physicians Arizona Regional Meeting,** Phoenix.
Dec. 12-14	**17th Hahnemann Symposium: Renal Failure,** Hahnemann Medical College and Hospital, Philadelphia.
Dec. 12-14	**20th Postgraduate Assembly in Anesthesiology, New York State Society of Anesthesiologists,** New York Hilton Hotel, New York.
Dec. 14-17	**Postgraduate Course on Infectious Diseases,** University of Pittsburgh School of Medicine and Medical Center, Pittsburgh
Jan. 7-8	**Residency Review Committee for Obstetrics and Gynecology,** Royal Orleans Hotel, New Orleans.
Jan. 8-10	**First Annual Clinical Meeting of the Society for Cryo-Ophthalmology,** Dunes Hotel, Las Vegas.
Jan. 11-13	**Postgraduate Course on Bedside Diagnosis, Part IV,** Hahnemann Medical College and Hospital, Philadelphia.
Jan. 15-21	**Postgraduate Course for General Practitioner,** University of Colorado School of Medicine, Denver.
Jan. 16-20	**Postgraduate Course on Basic Mechanisms of Renal Disease,** Cornell University Medical Center, New York Hospital, New York.
Jan. 22-23	**The First National Congress on the Socio-Economics of Health Care,** Palmer House, Chicago.
Jan. 23-24	**Postgraduate Course on Gynecology and Obstetrics,** University of Kansas Medical Center, Kansas City.
Jan. 23-27	**Postgraduate Course on Current Concepts in Blood Disease,** University of Miami School of Medicine, Fontainebleau Hotel, Miami Beach.
Jan. 27-28	**Council on Occupational Health,** Drake Hotel, Chicago.
Jan. 30-Feb. 3	**Postgraduate Course on Newer Aspects of Experimental and Clinical Allergy,** Harvard University Medical School, Sheraton-Boston Hotel, Boston.

ABROAD

Dec. 10-11	**14th National Meeting, French Society of Pediatric Surgery,** Paris.
Dec. 28-30	**42nd All-India Medical Conference, Indian Medical Association,** Dhanbad.

U. OF I. POSTGRADUATE SHORT COURSES

CARDIAC AND RESPIRATORY DISEASE CONFERENCE

Friday morning, December 9

A SYMPOSIUM ON CARDIOVASCULAR DISEASES

9:00 a.m. "Platelets and Thrombosis"
J. C. Hoak, M.D.

9:15 a.m. "Mitral Insufficiencies"
T. E. Layman, M.D.

9:30 a.m. "Current Deficiencies in the Management of Hypertensive Vascular Disease"
M. L. Armstrong, M.D.

9:45 a.m. "Cardiovascular Monitoring in Intensive Care Units"
F. M. Abboud, M.D.

10:30 a.m. "Recent Experiences With Myocardiopathies"
D. C. Funk, M.D.

10:45 a.m. "Extracardiac Clues to Cardiac Diagnoses"
N. O. Fowler, M.D., professor of medicine, University of Cincinnati

11:45 a.m. DISCUSSION

12:30 p.m. LUNCHEON

Friday afternoon, December 9

AIR POLLUTION AND PULMONARY DISEASES

1:30 p.m. "Air Pollution as a Cause of Pulmonary Disease"
D. B. Bigelow, M.D., instructor in medicine, University of Colorado

2:10 p.m. FILM—"Mechanism of Air Pollution"

2:40 p.m. "Role of Organized Medicine in Control of Air Pollution"
J. G. Telfer, M.D., director, AMA Department of Environmental Health, Chicago

3:35 p.m. "Role of the Engineer in Control of Air Pollution"
C. L. Campbell, Ph.D., director, Section on Occupational Health, State Department of Health, Des Moines

4:15 p.m. GENERAL DISCUSSION
G. N. Bedell, M.D., Moderator

Registration: There will be no registration fee, but all physicians attending the courses are asked to register.

AAGP Credit: Each program is accredited for three hours, or a total of six hours for the entire day, by the American Academy of General Practice.

Parking: Physicians attending this course are asked to park in the Newton Road Parking Area. Parking permits are necessary and are available upon request. A Campus Security Officer will be available to assist you.

OBSTETRICS AND GYNECOLOGY

Tuesday, January 17

FORMER- AND CURRENT-RESIDENT FORUM

9:00 a.m. "An Evaluation of Fetal Blood pH as a Reflection of Fetal Well-Being"
John S. McDonald, M.D., current resident

9:30 a.m. "The Morbid Parturient, Who, When and Why"
James J. Delaney, M.D., current resident

(Continued on page 1255)

Guidelines for Telephone Directory Listings

The Judicial Council of the Iowa Medical Society, at its regular quarterly meeting in Des Moines on July 13, 1966, endorsed the following statement regarding physicians' listings on the "Yellow Pages" of telephone directories, which the AMA Judicial Council had agreed upon, at the end of the preceding month, during the AMA annual meeting in Chicago. The IMS Judicial Council thereupon ordered that the statement be distributed to all county medical society secretaries in Iowa, and that it be published in the JOURNAL OF THE IOWA MEDICAL SOCIETY.

"The public is entitled to know the names of physicians, the type of their practices, the location of their offices, their office hours, and the like. The physician may ethically furnish this information through the accepted local media of communications which are open to all physicians on like conditions.

"To the extent that such information may appear in telephone directories, the [AMA] Judicial Council is of the opinion that guidelines are desirable to assist the public, to maintain the dignity of the medical profession and to assure uniformity of practice from community to community.

"The following suggestions for telephone listings have been drafted for the guidance of physicians and county medical societies:

I

"In telephone directory listings of doctors of medicine, it is preferable for the physician's name to be followed by the abbreviation 'M.D.' The use of the 'Dr.' preceding the name is misleading. It could refer to a doctor of dentistry, doctor of osteopathy, doctor of philosophy, doctor of divinity, etc. The use of the abbreviation 'Phys.' may also be confusing, for it can refer to doctors of osteopathy.

II

"Physicians' names should be listed alphabetically in the classified section of the telephone directory. It is not objectionable in this alphabetical listing to follow the physician's name with the simple statement 'practice limited to .'

"If, in a particular community, the county medical society believes it would be helpful to the public to follow the alphabetical listing with a listing of physicians by type of practice, only those specialties and subspecialties recognized by the American Medical Association and the Advisory Board for Medical Specialties should be used. Only those physicians who are Board certified or who limit their practice exclusively to a specialty should list themselves in the designated field.

"No physician should be permitted to list himself under more than two such specialties or subspecialties.

"Multiple listings and specialty listings by those not certified or who do not limit their practice to the specialty can be a form of self-aggrandizement. They can also confuse the patient who should not be expected to diagnose his own condition and determine the specialist he should consult.

III

"The size and face of type in the classified section should be uniform.

IV

"Display or box advertisements for individual physicians or groups of physicians or for clinics are not in keeping with the dignity of the medical profession and are not recommended.

V

"The name of a physician should not be listed in a telephone directory of a locality where he does not have an office, residence, or hospital affiliation. An exception to this general guide may be necessary in larger metropolitan areas because of the growth pattern of the community or because telephone directories are subdivided according to geographic areas. Under these conditions a physician's name, to be properly identified for community services, may appear in a directory of a locality in which he does not have an office, residence or hospital affiliation, in accordance with specific guidelines established by the local medical society or societies in these areas.

VI

"In larger metropolitan areas listings of physicians according to a locality descriptive of their practice areas is not objectionable if the practice is approved by the county medical society and serves the public good.

VII

"It is permissible to list answering service numbers for the convenience of patients.

VIII

"It is commendable for the county medical society to utilize a display or box advertisement to list its address, office hours, and services for the public e.g., emergency medical service and assistance in selecting a physician.

The county medical society, in the last analysis, must ascertain local community needs and through a well thought-out program serve those needs. It is incumbent on the county medical society to implement these guidelines for the local medical community. With an established program, the county medical society can meet with representatives of the telephone company and develop an acceptable program of public service.

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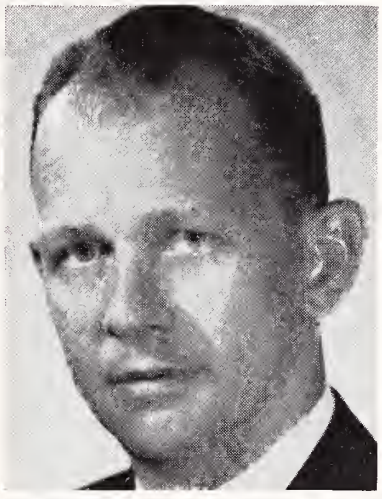

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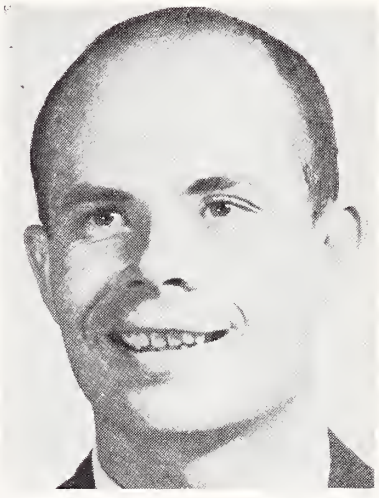

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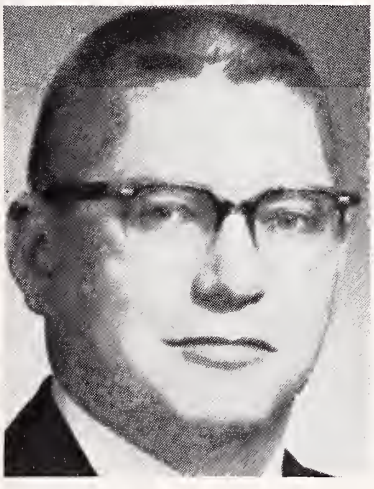

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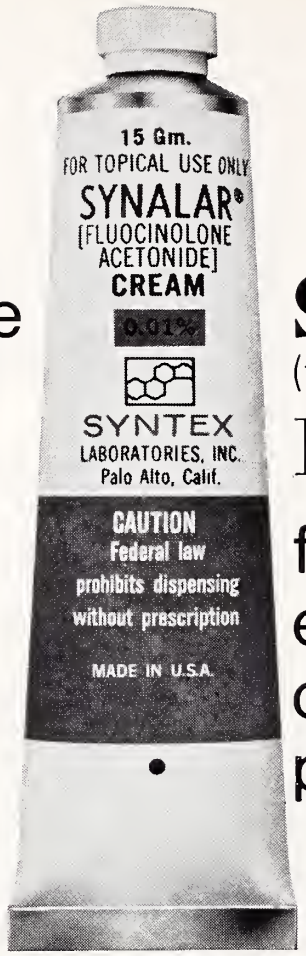

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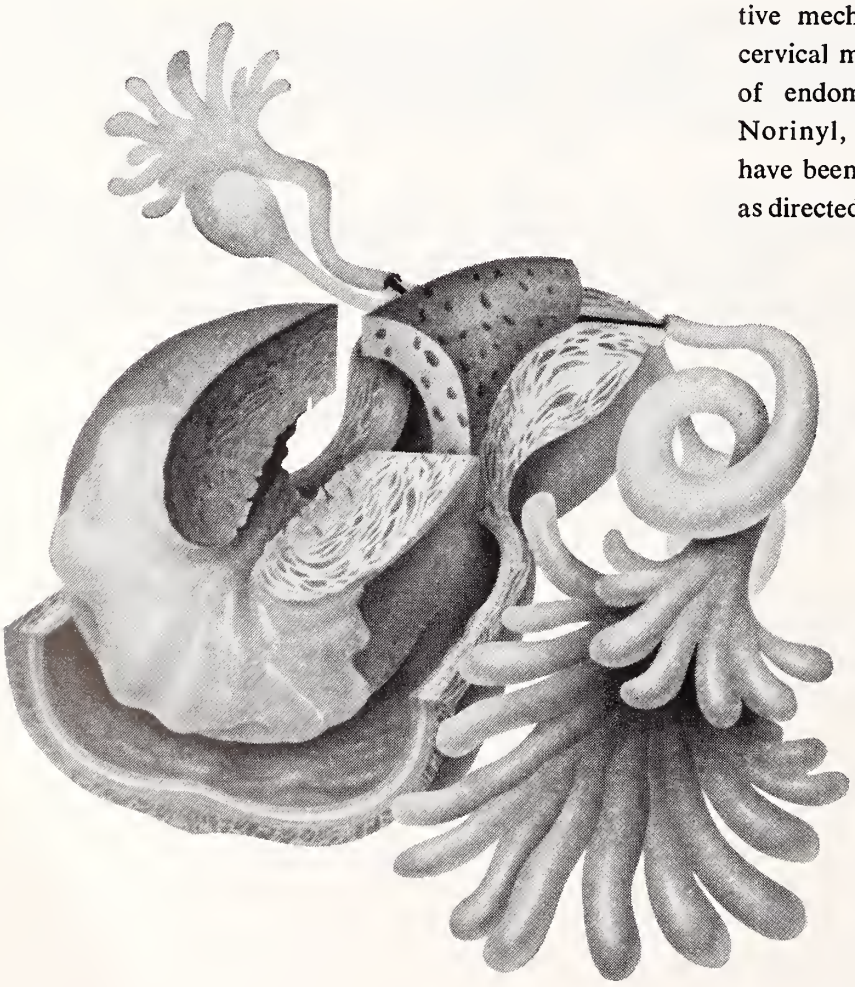

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Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: **1.** Council on Drugs. JAMA 187:664 (Feb. 29) 1964. **2.** Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. **3.** Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. **4.** Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. **5.** Hammond, D. O.: Ibid. **6.** Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. **7.** Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. **8.** Kempers, R. D.: GP 29:88 (Jan.) 1964. **9.** Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. **10.** Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. **11.** Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. **12.** Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. **13.** The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. **14.** Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. **15.** Merritt, R. I.: Appl Ther 6:427 (May) 1964. **16.** Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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SQUIBB NOTES ON THERAPY

Breast-feeding and the "modern mother"

Despite a mild resurgence of interest in the importance of breast-feeding a few years ago, many women today do not choose to nurse their young. This is for a variety of reasons—social, economic, cultural and sometimes medical. In such cases the physician's task is to find the most suitable means of preventing lactation and easing the pain of breast engorgement.

The means of therapy

The value of hormone therapy for this indication is of course well established. Both androgen and estrogen are known to inhibit the production and secretion of the lactogenic hormone by the anterior pituitary. As estrogen levels decline sharply at parturition, lactogenesis is established. When androgen and estrogen are administered to the patient before the release of the lactogenic hormone lactation and breast engorgement are usually prevented.

The time of therapy

The time of administration of this combined medication is crucial; it must be given early enough to suppress the pituitary prolactin and last long enough to permit physiologic readjustment during the puerperium. Excellent results are most often seen when therapy is administered before the onset of the second stage of labor.

However, factors other than effectiveness must also be considered. The agent selected should not interfere in any way with parturition, subsequent uterine involution and the restoration of normal ovarian cyclic function. Furthermore, it should not cause rebound breast engorgement or other manifestations of hormonal imbalance.

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As reported in a recent published study (Roser, D. M.: Obstet. & Gynec. *27*:73, 1966), Deladumone OB provided good suppression of breast engorgement in 95.3% and suppression of lactation in 81.1% of 86 obstetrical patients. These results are in general agreement with those of many earlier investigations; in several studies this injectable androgen-estrogen combination proved to be superior to oral medication.

Dosage:

As a single injection of 2 cc. before the onset of the second stage of labor.

Contraindications:

Established or suspected mammary cancer or genital malignancy.

Precautions and Side Effects:

Certain patients may be unusually responsive to either estrogenic or androgenic therapy. In such individuals virilization, uterine bleeding or mastodynia may occur.

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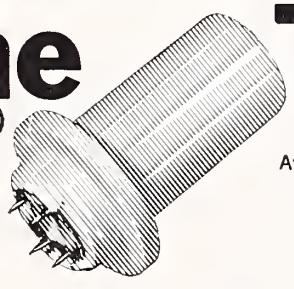

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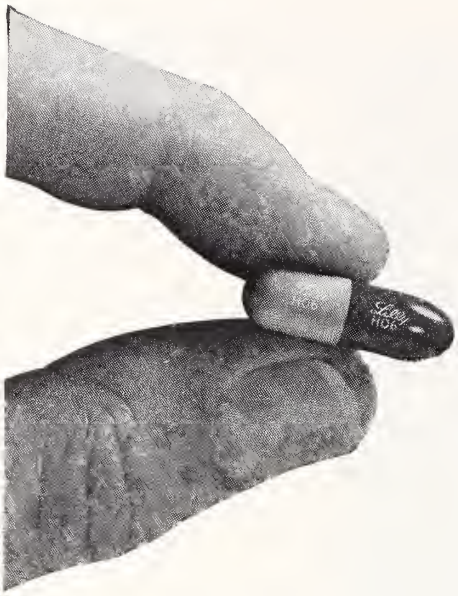

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Scientific Articles

Topics In Office Urology—A Panoramic View

R. H. FLOCKS, M.D.
Iowa City

IT IS NOT GENERALLY RECOGNIZED that as much as 85 to 90 per cent of urology is or can be performed in the physician's office. It may consist of both diagnostic and therapeutic procedures, with minor surgical and medical treatments being carried out on ambulatory patients. It has been variously estimated moreover, that between 12 and 15 per cent of the patients whom the rural general practitioner sees in his office present problems that are essentially urologic in diagnosis and therapy. It is my purpose briefly to discuss some of the commoner urologic situations that can confront the physician in his office.

KIDNEY

Statistical studies have shown very definitely that in a child under 10 years of age the commonest cause of a mass in the upper abdomen is some form of renal lesion. Most frequently it is a large congenital hydronephrosis. The second commonest is Wilms's tumor (Figure 1). In dealing with an abdominal mass in a child, it therefore behooves us to suspect such a lesion, no matter what the symptomatology is or how readily the lesion is palpated. Many of them are large enough to cross the midline and are readily palpated abdominally, even in the epigastric regions. Once they are suspected, intravenous pyelography and other urologic studies are indicated. These easily rule such a lesion in or out. An absence of findings in the urine is characteristic of patients with these lesions, and consequently a negative urine is of no importance. For all practical purposes, one can say that over 50 per cent of abdominal masses in children under 10 years of age are related to the urinary tract, and also that well over 50 per cent of abdominal masses in males over 60 years of age are related to the urinary tract. As for patients in the intervening age groups, of course the commonest mass in the female of child-bearing age is occasioned by pregnancy, and one can say generally that the masses found in patients between the ages of 10 and 60 probably *are not* related to the urinary tract.

Both in the child and in the adult the onset of renal disease may be quite insidious, and renal function may be damaged gradually by chronic renal disease, either intrinsically by processes involving essentially the parenchyma, or extrinsically by those involving the collecting system. Lesions such as glomerulonephritis, congenital hydronephrosis, bilateral chronic renal infection, bilateral urolithiasis and other types of congenital lesions such as polycystic disease may gradually alter the renal function in either a child or an adult without producing symptoms that would lead one directly to suspect the urinary tract and the kidneys. In a situation such as a child's failure to grow or an adult's loss of appetite and loss of weight, with or without urinary findings, a careful assessment of renal function is of great importance. Renal function can be readily ascertained in the office—in some instances without complicated blood studies—if the following technics are employed.

1. One of the simplest is to note the effects that an alteration in the intake of fluids has upon the specific gravity of the urine. Following dehydration, the specific gravity should go above 1.020, and after the intake of large quantities of fluid, it should fall to 1.003. If a relatively low but fixed

Dr. Flocks is professor and head of urology at the U. of I. College of Medicine, and he made this presentation at the 1966 annual meeting of the Iowa Medical Society.

Figure 1. Wilms's tumor in a girl six years of age. A. Appearance of abdomen at the time the diagnosis was made. B. Appearance of abdomen after preoperative irradiation therapy. The mass had been markedly reduced by that means. It was subsequently removed, and Actinomycin D therapy was administered afterward. Thus far, the results have been good.

specific gravity is obtained, a further investigation of renal function is indicated.

2. Other methods for readily ascertaining renal function in the office consist of injecting dyes which the kidney excretes readily when good renal function is present. The dyes most commonly used for this purpose are indigo carmine and phenolsulfonphthalein. If the patient's renal function is good, indigo carmine should appear in his urine within four or five minutes after injection. After 6 mg. of phenolsulfonphthalein has been injected intravenously, the patient is asked to force fluids, and his urine is collected every half hour for two hours. At least 25 to 30 per cent of the total injected material should be excreted in the first half-hour, and the urine should turn a very pronounced pink when it is alkalinized. Seventy-five to 80 per cent of the total amount injected should be excreted within two hours. In patients exhibiting evidence of interference with renal function, blood urea nitrogen, creatinine and creatinine-clearance tests, and other more sophisticated tests for renal function are indicated. Intravenous pyelography is also extremely helpful in that it adds another parameter —the anatomy of the urinary tract—to the evidence regarding renal function.

The urine examination is important. There has been a great deal of controversy with regard to the proper method for obtaining a specimen of urine for accurate study from the point of view of bacteria, from the point of view of pus and from the point of view of other formed elements. If the patient is a male and is able to void voluntarily, it is usually easy to get such a specimen, for one can have him urinate a small preliminary amount for the purpose of cleaning his urethra, and can then be reasonably certain that the urine which he passes afterward will not have been grossly contaminated. If the remainder of the specimen is collected in a sterile container, part of it can be sent to the laboratory for culture, and the rest can be spun down for studies of formed elements and bacteria.

In the female, it is difficult to avoid contamination from the vaginal contents, and in most instances a specimen must be removed by catheter if one is really to avoid contamination from the vulva and vagina. One should place the patient in the lithotomy position and have the nurse prep

the area very carefully. Then, using sterile gloves and a sterile catheter, and introducing the catheter carefully so as to avoid traumatizing the urethra, one can obtain the kind of urine specimen that is really useful for studies of infecting organisms and formed elements.

It is extremely important to realize that bacteria, pus, blood and the formed elements in urine obtained either by the "clean catch" technic in the male or by a very careful urethral catheterization in the female, does not tell one where the blood, pus or bacteria are coming from. They may have originated anywhere along the urinary tract. They may have come from the kidney itself, from the kidney pelvis, from the ureter, from the bladder and the urethra, or from structures or lesions that involve any of them. Consequently a discovery of such formed elements needs to be followed by a definitive investigation to determine *where they are coming from* and *what kind of lesion is producing them.* In a case of hematuria, for example, we may be dealing with glomerulonephritis or with a pre-renal disease such as leukemia. On the other hand, we may be dealing with a kidney-pelvis tumor, with a prostatic hypertrophy or with a bladder tumor. Similarly, when one has found pus and bacteria in a specimen, he must next determine whether the infection is arising from the kidney itself, from the kidney pelvis, from structures adjacent to the ureter or bladder such as an appendiceal abscess, from the bladder itself as in cystitis, or from a prostatitis or periurethral abscess emptying into the urinary passageway. When one has found pus and organisms in the urine, it is not immediately correct to make a diagnosis of pyelonephritis and to start administering some kind of antibiotic, but rather to find out where the pus is coming from and why it is coming from there, so that an intelligent regimen for therapy can be formulated and carried out.

BLADDER

The urinary bladder is the seat of a great many conditions which may be treated in the physician's office. The major problem is the differential diagnosis—the making of a choice from among the various causes of bladder difficulties. Infections, the commonest lesions involving the bladder, may well be treated in the office. They need to be differentiated from cancer, from vesical calculus and from conditions involving primarily the urethra in both the male and the female, and from those involving the prostate in the male. Bladder conditions involving infection, frequency of urination, hematuria, pyuria and bacteriuria in children under 10 years of age, or in males over 45 years of age, need a thorough urologic examination, since practically always the infection and the bladder symptoms are associated with serious urologic diseases such as congenital anomalies producing obstruction to the outflow of urine in children, to stone formation, or in the adult to bladder-neck obstruction due to bladder-neck contracture, prostatic hypertrophy, or prostatic cancer and bladder cancer. In the intervening period —between the ages of 10 and 45—the onset of bladder problems is practically always associated with infection. Other conditions such as vesical calculus, bladder obstruction and neurogenic bladder are readily differentiated on the basis of the history and the physical findings.

Such infections and other causes of bladder irritation are readily cleared up by means of:

A. Drugs which are chemotherapeutically directed against infection

B. Antibiotics

C. Chemotherapeutic agents directly instilled into the bladder itself.

It is wise to make a Gram-stain of the urine, and also to get a culture, so that the proper drug can be utilized. Many of these infections will yield very rapidly to a broad-spectrum antibiotic such as the tetracyclines, and that medication should then be followed up by maintenance doses of a drug such as Furadantin or Gantrisin for a period ranging from six to eight weeks. In the female particularly, it may be useful to instill 100 cc. of 1:6 Furacin solution or 100 cc. of 1:1,000 silver nitrate into the bladder. These solutions can be instilled as often as once a day until the infection has been cleared up. The intervals between instillations can be gradually lengthened, and then the treatment can be discontinued after about two months.

Occasionally, rather than representing an infection, the lesion of the female bladder may be essentially irritative, as are the so-called Hunter's ulcer and bladder-neck polyps. These are best treated by instillations of 100 cc. of 1:1,000 silver nitrate daily over a period of several weeks. This medication alters the character of the vesical mucosa and gradually destroys the etiologic factor underlying the bladder irritation.

An uninhibitedly neurogenic bladder or neurogenic bladders of other types should be regarded as definite possibilities when irritation is present without infection. If the patient is emptying his bladder well, drugs such as Banthine and Pro-Banthine are extremely useful. Hot sitz baths and hot vaginal douches are helpful in the treatment of these lesions. The dosage of Banthine is 50 mg. three times daily, and Furadantin can be given in doses ranging from 50 to 100 mg., three times daily. Gantrisin is usually given in doses of 1 Gm., five times daily.

URETHRA—FEMALE

The female urethra is the site of a tremendous amount of discomfort and minor difficulties that can become major ones. A careful examination of the urethra should always be carried out (Figure

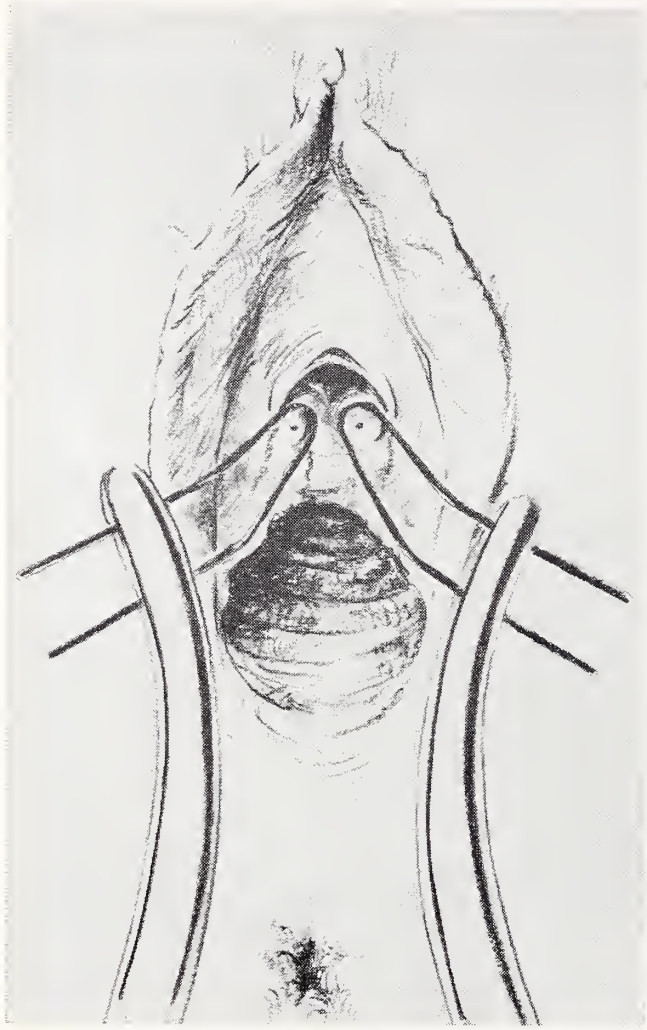

Figure 2. Method of examination of external meatus in the female.

2). Any adult female urethra which does not accept a No. 24 French bougie needs to be dilated, and in many instances a meatotomy should be carried out. One can do this by simply injecting Novocain, 1 per cent, around the urethra, and making a small incision posteriorly for about 0.5 cm. in the adult, so that a No. 30 French bougie can readily pass through. A few No. 000 plain catgut sutures to approximate the skin and mucous membrane in this area will control the bleeding satisfactorily. Usually, patients need not be hospitalized, and can return home and void satisfactorily following such a dilatation and meatotomy. This procedure, together with the medical treatment outlined previously, is satisfactory care for infection. In elderly women going through menopause or in the postmenopausal period, Stilbestrol suppositories are helpful in softening tissues around the urethra which have become contracted and are causing a stricture.

Other conditions of the female urethra are, of course, cancer (though it is rare and requires radical surgery), caruncle and periurethral infection. The caruncles frequently cause no difficulty. If they are painful, they can readily be removed by means such as that outlined above for stricture. It can be done under local anesthesia in a manner much like the one for a meatotomy. Periurethral infections are not common. They are best treated by hot sitz baths, hot douches and drainage under local anesthesia when indicated. Care should be taken, however, not to create a urethrovaginal fistula (Figures 3, 4 and 5).

Incontinence is not uncommon in the female. One needs to make a very accurate differential diagnosis among the various types of incontinence, such as stress incontinence, urgency incontinence, neurogenic bladder, and other conditions such as paradoxical overflow incontinence. A careful urologic and general physical examination will usually serve to differentiate the type of incontinence present.

These various conditions require separate therapies. Stress incontinence requires a plastic procedure to correct the angle of the urethra and to overcome the weakness of the urethral vesicovaginal musculature. Urgency incontinence requires correction of an underlying cause, such as cystitis. Neurogenic bladder may require anticholinergic drugs, or treatment directed primarily toward the neurologic disease. An intensive, careful urologic workup is indicated in all cases of incontinence in the female.

URETHRA—MALE

Nonspecific and specific urethritis are not so common as they used to be, but they are still encountered. Specific urethritis associated with urethral discharge will respond readily to an adequate dosage of penicillin. Nonspecific urethritis may clear up rapidly in consequence of the appropriate utilization of an antibiotic, followed over a period of several months by an oral administration of Furadantin or Gantrisin. A failure to clear may be evidence that there is a urethral stricture which needs to be dilated, and that local medical therapy is indicated. Instillations of 10 or 15 cc. of 1:6 Furacin solution into the urethra are helpful. If stricture is present, the urethra should be calibrated and the region of urethral stricture outlined. Then, intermittent dilatation by means of filiforms and followers is indicated (Figure 6). At first, the dilatations should be carried out about once every few weeks, the urethra being dilated two or three French sizes at a time. The intervals between dilatations should be gradually lengthened, so that ultimately dilatation is necessary no more than three or four times a year, and an adequate lumen, up to No. 20 to No. 24 French, can be maintained. If these objectives seem impossible of attainment, a more intensive urologic workup and possibly an operative procedure in the form of an internal or external urethrotomy are indicated.

Small polyps that may occur at the tip of the urethra can readily be coagulated by means of

Figure 3. Examination of mass at urinary meatus in a female. Hemorrhagic caruncle, mucosal eversion and cancer must be considered.

Figure 4. Examination of the female urethra—stripping the urethra for pus.

Figure 5. Diagram illustrative of a periurethral abscess probably involving Skene's glands on the left. Dilatation of the urethra, and incision and drainage under local anesthesia followed by sitz baths will clear the situation.

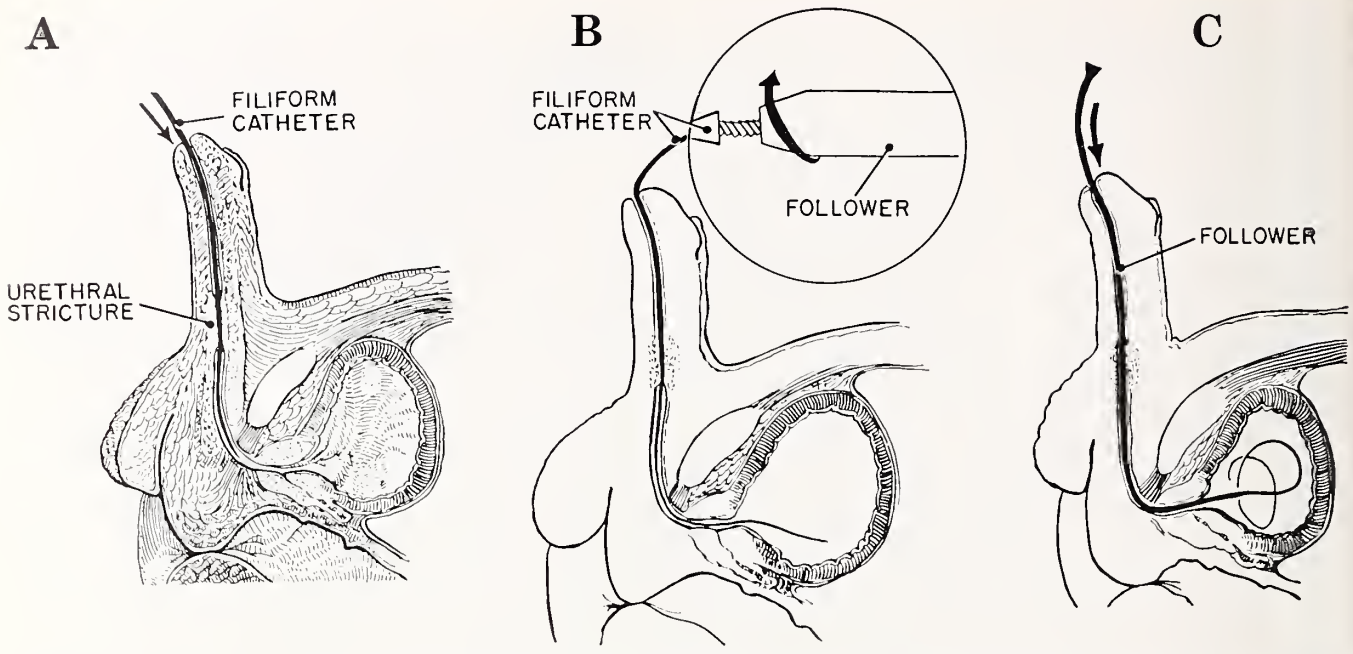

Figure 6. Dilatation of urethral stricture by means of filiform and follower. A. Diagram showing stricture in pendulous urethra being passed with a filiform. B. The dilating follower is screwed onto the filiform and passed through the strictured area. C. The completed dilatation.

Figure 7. A small polyp of the urethra can readily be removed by means of an electrosurgical current and under local anesthesia.

high-frequency current (Figure 7). Lesions involving the glans penis also can be coagulated readily. Meatal stricture is not uncommon, particularly following previous instrumentation or urethritis. The best treatment for meatal stricture is meatotomy (Figure 8). This is usually carried out under local anesthesia. After injecting the local area with 2 per cent Novocain, one places a straight hemostat in the urethra and outside the urethra ventrally for a distance of about 1 cm.—well past the meatal stricture. This is kept on for about 10 minutes. The straight scissors are then utilized to cut the compressed area, and a few stitches are inserted to approximate the mucosa to the skin and to act as hemostatic agents. For suture material, No. 0000 plain catgut and a cutting needle are used. This technic will produce a permanently wide-open meatus (Figure 9).

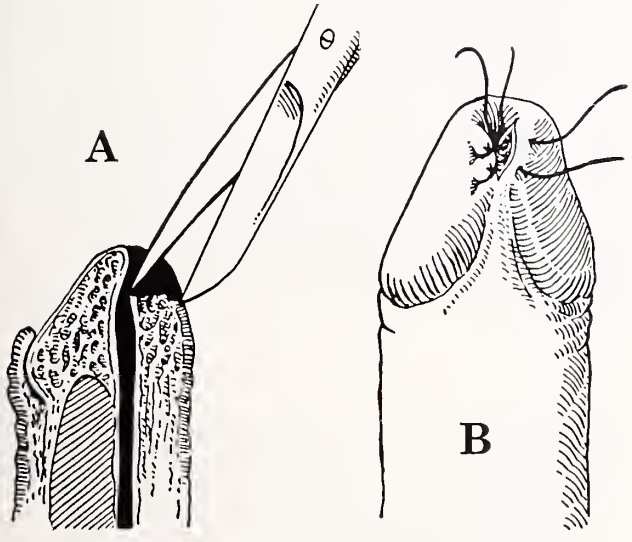

Figure 8. Meatotomy: The meatus and surrounding area are infiltrated with 2 per cent procaine, and scissors are used to cut the meatal stricture (picture A). The mucosa and skin edges are then approximated (picture B). Bleeding is thus controlled, and the strictured area is kept open until healing has been achieved.

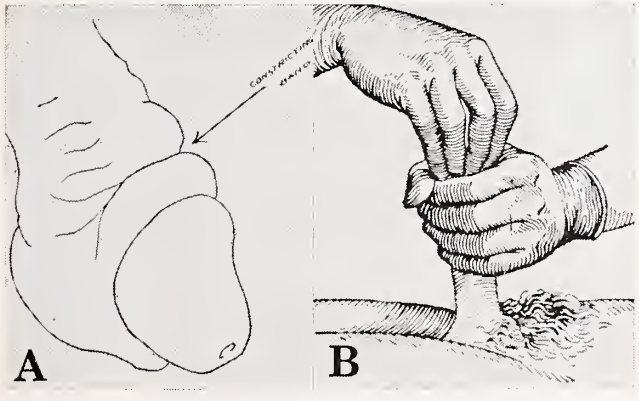

Figure 9. A. Paraphimosis. B. Correction of paraphimosis. Sometimes the constricting band needs to be incised under local anesthesia before the foreskin can be brought back to its normal position over the glans penis.

Peyronie's disease, or fibrous plaque in the corpora of the penis producing difficulties in erection, is a situation that is extremely difficult to deal with. Occasionally it will soften following administration of small doses of x-ray or following prolonged administration of 100 mg. doses of vitamin E, four times per day, or large doses of Potaba. If these measures are not helpful, it is best to try to persuade the patient to live with his condition. Surgical excision is usually followed by scarring and even more difficulty, with deformity of the shaft of the penis and an inability to secure adequate erections.

Prostatitis and seminal vesiculitis are very common in males over 40 years of age. They are very commonly associated with partial impotence, with low backache, and with pains and aches generally over the body. They may be associated with marked depression. Essentially, prostatitis is of two types. There is the infectious type of prostatitis in which a true bacterial infection involves the prostate, manifesting itself in a swelling of the prostate gland and perhaps involving the seminal vesicles. On rectal examination, the prostate is found to be tender, indurated and swollen, and the prostatic secretion is loaded with pus and bacteria. This kind of prostatitis may recur from time to time, but it is greatly improved by the administration of the usual anti-infection therapy over a sufficiently long period. Hot sitz baths daily serve to increase the local circulation; prostatic massage once weekly empties the infected, undrained areas of the prostate and seminal vesicles; and proper culture and proper antibiotic therapy for a week or 10 days, followed by persistent administration of chemotherapeutic agents such as Furadantin, 100 mg. t.i.d., or Gantrisin, 1 Gm. four times daily, will clear up the bacterial infection and do away with the patient's symptoms. Occasionally one must inject the seminal vesicles with some type of chemotherapeutic agent such as Furacin solution through the vas deferens.

The second type of prostatitis is the congestive one that is associated either with sexual excesses or with prolonged intervals of relative abstinence. This type of situation is more difficult to deal with, and frequently it is marked by an absence of pus, by relative impotence and by depression and low backache. Prostatic massage and an improvement in sexual habits will usually clear up the situation fairly rapidly. In some instances, however, some form of antidepressant drug and biweekly intramuscular injections of some form of androgen are indicated.

Chronic prostatitis is one of the commonest problems that confront the physician in his office. It is frequently associated with general aches and pains and with depression, and the patient doesn't always lead the physician to the problem during the history-taking process.

DISEASES OF THE SCROTUM AND ITS CONTENTS

Treatment for several diseases of the scrotum are possible while the patients remain ambulatory. Hydrocele, hydrocele sacs and spermatoceles all cause discomfort when they are large, and occasionally they are painful. Rather than surgical correction, aspiration of such a mass is occasionally indicated. Aspiration can be carried out in the office under anesthesia and under antiseptic conditions (Figure 10). Sometimes the sac will not refill, but it usually does, and occasionally it becomes infected. Thus, following aspiration of fluid from a hydrocele sac, it is wise to place the

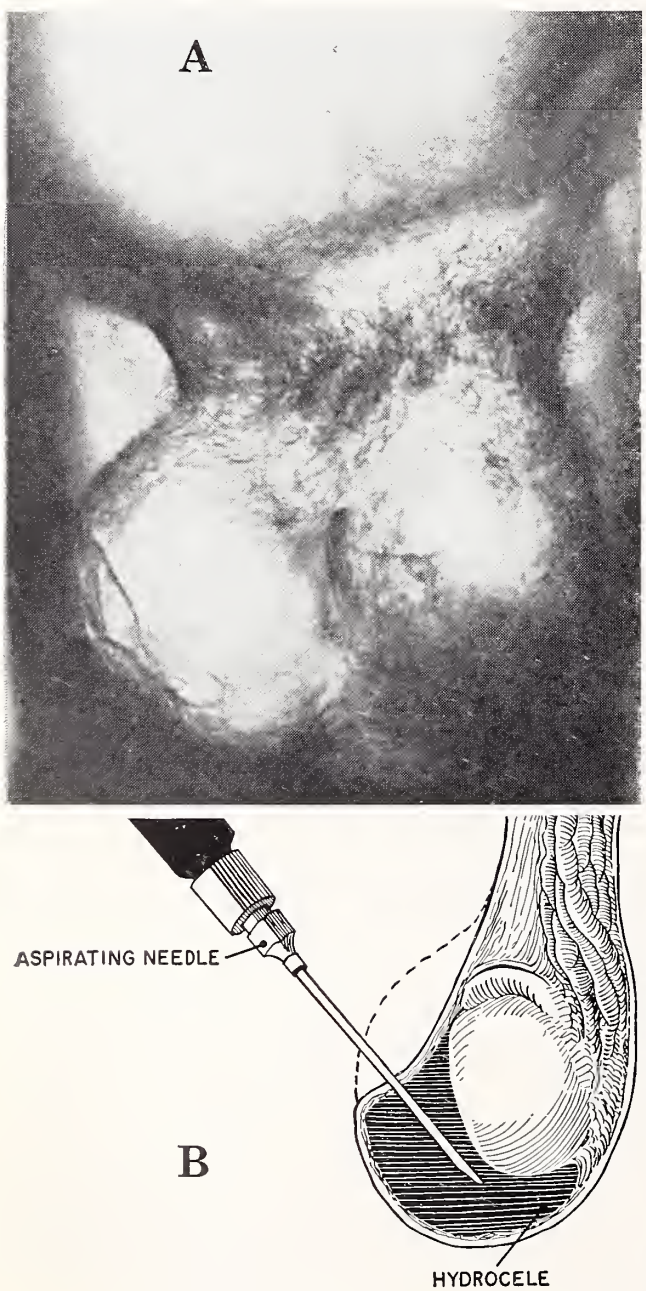

Figure 10. A. Marked bilateral hydrocele. B. Aspiration of hydrocele.

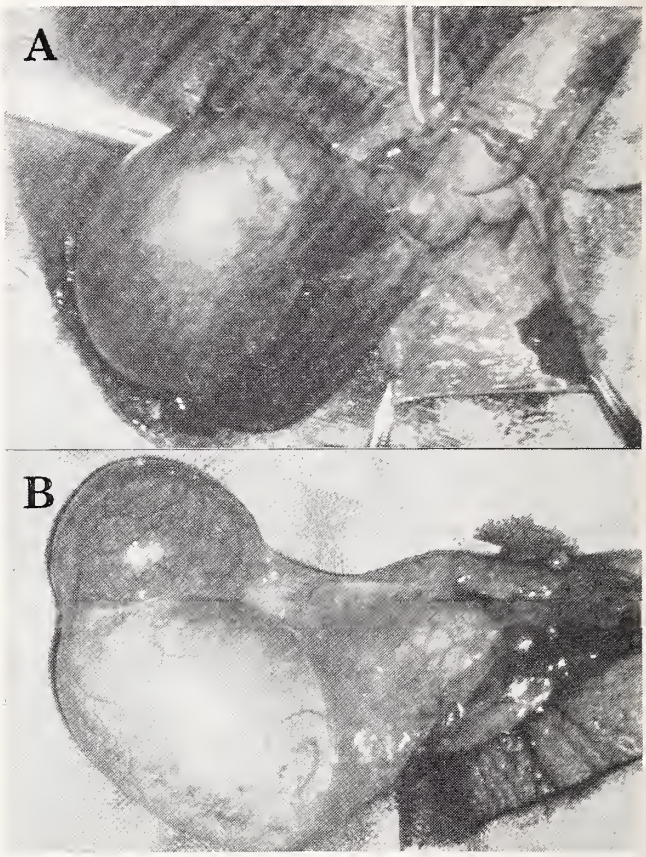

Figure 11. A. Operative view of torsion of testis. Note the discoloration of the testes and the twisted cord structures. B. The same patient following the untwisting of his cord. Note the return of normal color to the testes.

Figure 12. Varicocele, left. Such abnormalities are of no significance when they are on the left side. On the right, however, they are important and may indicate an obstructive right retroperitoneal mass.

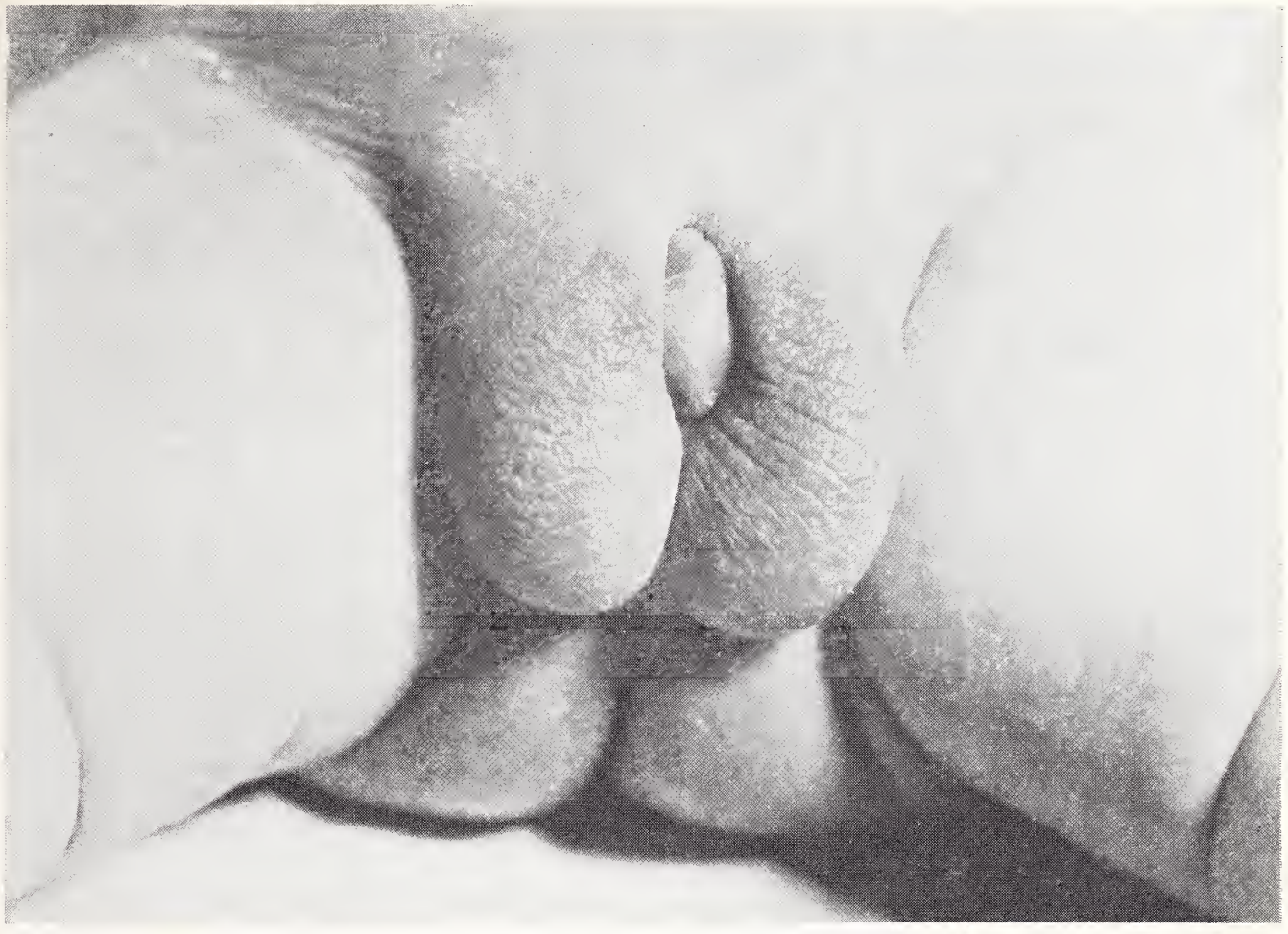

Figure 13. Equivocal genitalia in a baby. A buccal smear to ascertain genetic sex is the first examination indicated. The infant may be a hypospadic male, an intersex or a female with a large clitoris. More studies are indicated.

patient on some form of antibiotic for a week or so, as a prophylactic against infection.

Painful conditions involving the testes and epididymis are important from the point of view of differential diagnosis. In boys and young men, pain following a sudden movement or trauma may be associated with torsion of the testis (Figure 11). This condition is an emergency, for if it is not corrected promptly, the testis may be lost as a result of infarction. A similar picture can occur as a result of epididymitis in older patients. The condition can be treated by means of a scrotal support, local injection into the cord structures of 30 to 40 cc. of 2 per cent Novocain to relieve the pain, and proper antibiotic therapy. Tumors of the testis need to be ruled out, since sometimes they become manifest following trauma, and produce a leukocytosis and elevated fever and pain simulating epididymitis. Chronic epididymitis as-

Figure 14. Cryptorchidism.

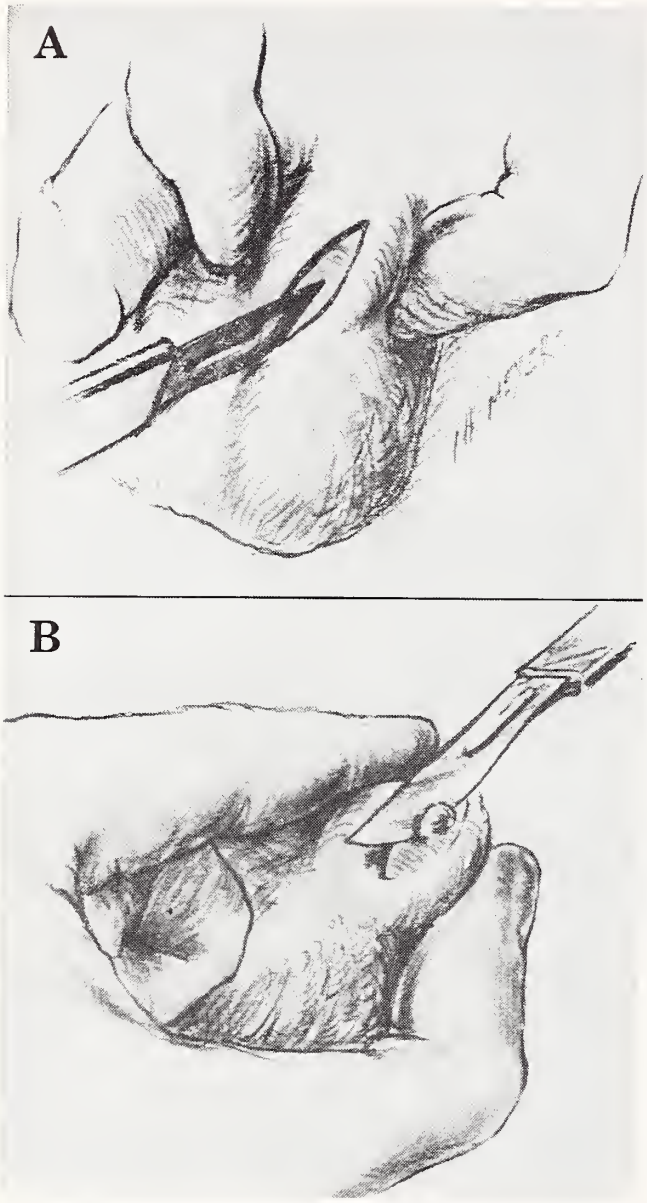

Figure 15. Testicular biopsy. After local infiltration anesthesia, the scrotal skin is incised, and the tunica vaginalis is infiltrated and incised as is shown in B. The biopsy material is removed and placed in Bouin's solution for study later. Two or three mattress sutures close the incision in the testicular tunic, and two more of them close the incision in the scrotum.

sociated with tuberculosis is relatively uncommon. Varicocele is of no consequence unless it produces a heaviness in the scrotum, and if so, surgical therapy can correct it (Figure 12).

Anomalies of position such as an undescended testis, small testes, micropenis and similar anatomical abnormalities involving the scrotal contents and the penis in the male should provoke further investigation with regard to the possibility of Kleinfelter's syndrome or some other form of intersexuality (Figures 13, 14 and 15).

As regards the whole problem of male infertility, careful physical examination should rule out any abnormality of the testes, penis, prostate and/or seminal vesicles. If all these are normal, a careful semen examination should be carried out so as to rule in or rule out infertility in an infertile marriage (Figure 16).

CONCLUSION

In conclusion, I want to emphasize that office urology is common, both for the urologist and for the generalist, and that it is going to grow commoner. The two age groups in which urologic difficulties are numerous are childhood and old age, and both those segments of the population are growing, not only absolutely but relatively.

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SEMEN ANALYSIS
DEPT. OF UROLOGY

PATIENT: ..... AGE: ..... HOSPITAL # .....

DATE	DAYS OF CONTINENCE	VOL. CC	LIQUEFAC.	COUNT M/cc	% VIABIL.	Ab. FORMS	ACTIVITY	ADDED OBSERVATIONS

Figure 16. Chart for study of semen in cases of suspected male infertility.

Indications for Chromosomal Analysis in Mongolism

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Most cytogenetic laboratories are not staffed and equipped to karyotype every case of mongolism and paramongolism, although such data would be desirable in order that additional information about the incidence of the various chromosomal complements found in mongolism might be compiled. The clinician, therefore, must select those cases in which chromosomal analysis is definitely indicated. This presentation will be limited to a discussion of the three main indications for the procedure. They are listed in Table 1.

TABLE 1
A CHROMOSOMAL ANALYSIS IS INDICATED IN

1. Cases where the diagnosis of mongolism is doubtful.
2. Mongoloids born of mothers below the age of 30 years and both parents of such mongoloids.
3. Mongoloids who have mongoloid relatives.

The physician and/or the parents of a mongoloid child may ask for a chromosomal analysis even though the case does not fulfill any of the indications listed in Table 1. Whether or not to comply with such a request rests with the director of the cytogenetic laboratory after he has consulted with the local physician.

CASES WHERE THE DIAGNOSIS OF MONGOLISM IS DOUBTFUL

"Mongolism is an all-or-none condition; an individual either is or is not mongoloid." Such statements as the above are found occasionally in texts, but although they contain a grain of truth, they no longer withstand critical analysis. Their inaccuracy becomes evident when mongolism is compared with other constitutional anomalies such as, for instance, Marfan's syndrome. A fully developed case of Marfan's syndrome is characterized by a number of signs and symptoms: macrosomia, dolichostenomelia, scoliosis, ectopia lentis, cardiovascular manifestations, muscular hypotonia, etc. Yet besides the cases that present all those signs and symptoms, one finds numerous cases with just a few or only one of those manifestations. Such cases, also called *formes frustes*, represent intermediary stages between clear-cut Marfan's syndrome* and "normalcy" (see Figure 1). Thus there is a continuum of transitional states, and often it is almost impossible to decide

* It is quite possible that only some of the so-called *formes frustes* are due to the mutant gene of Marfan's syndrome. Other cases may belong to other nosologic entities.

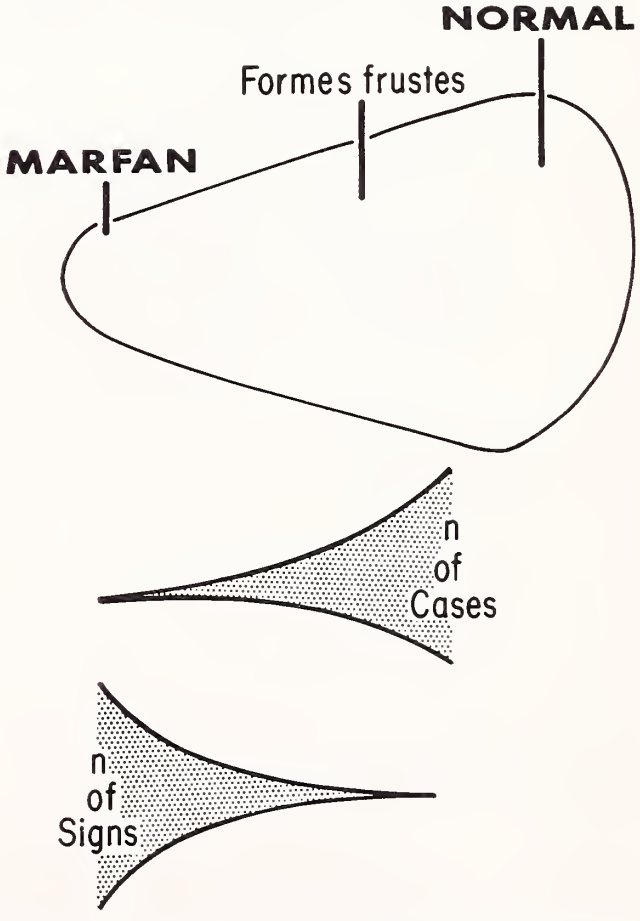

Figure 1. Marfan's syndrome and its formes frustes leading over to the "normal" state. The more the number of cases of formes frustes increases, the more the symptomatology approaches the state of "normalcy."

Dr. Zellweger is a professor of pediatrics at the University of Iowa College of Medicine.

whether a case is a "clear-cut Marfan" or a *forme fruste*. Even more frequently, one encounters cases in which he has trouble distinguishing between *formes frustes* and the so-called "normal state." The more the symptomatology approaches "normalcy," the greater the number of *forme fruste* cases.

The situation is different in mongolism, as is shown in Figure 2. The small circle on the left side of the diagram represents the cases of mongolism showing varying numbers of mongoloid stigmata. The larger circle on the right side represents the "normals." Some "normals" show a few mongoloid stigmata, but their abnormalities rarely necessitate diagnostic procedures to rule out mongolism.

Mongoloid stigmata occur in various conditions besides those that are listed in Figure 2. The diagnosis of mongolism is made *prima vista* in the majority of cases, and it presents difficulties only very rarely. Only a few cases that fall between monogolism and normalcy present with clinical manifestations. These cases are indicated in the diagram by the small communication between the small circle (mongolism) and the larger circle (normalcy). The very few non-mongoloid patients having abnormalities resembling those of mongolism are sometimes called paramongoloids (though the term has created some controversies). Mongolism and paramongolism can usually be differentiated on clinical grounds alone, but the distinctions between a paramongoloid and "a normal child with mongoloid stigmata" have not been sharply defined. Whether an individual with four, five or six mongoloid stigmata should be called a "paramongoloid" or a "mongoloid-stigmatized normal" is merely an academic question without practical consequences.

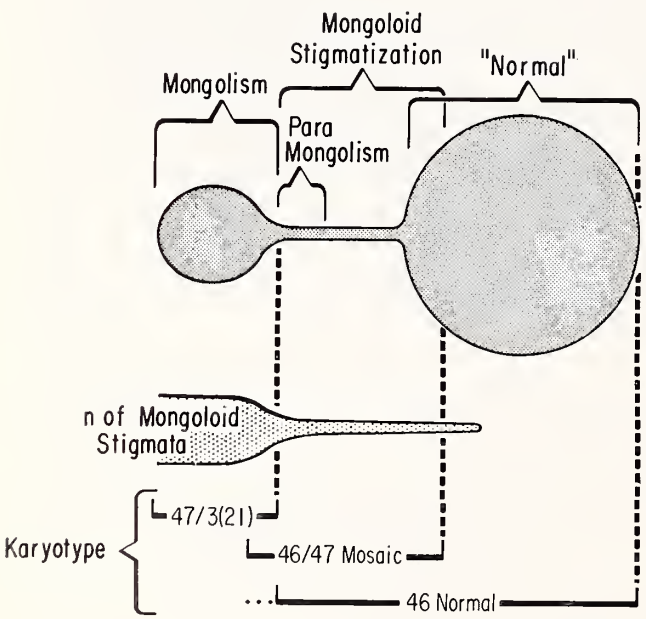

Figure 2. Mongolism, paramongolism, and mongoloid stigmatization leading over to the "normal" state (see text). Paramongolism and mongoloid stigmatization as transitional states between mongolism and the "normal" state. Chromosomal complements of the various states.

If one has difficulty in distinguishing between mongolism and paramongolism, the chromosomal analysis may be helpful. A trisomy-21 or a partial trisomy-21 (translocation, interchange) in all cells would speak undoubtedly for mongolism and would rule out paramongolism. Likewise, the presence of a karyotype with 46 normal chromosomes would rule out mongolism. A few extremely rare exceptions from this rule[2-4] are indicated by the dots in Figure 2. The existence of the latter is not accepted by everybody. Some authors assume that a hidden trisomic clone may account for the mongolism in such cases, or that the extra G chromosome can have been interchanged with a larger chromosome without the transfer's being detectable. Cases with normal karyotypes in the peripheral white blood cells but with 21-trisomic fibroblasts (skin cultures) have been reported.[5, 6] Forty-six normal chromosomes are found occasionally in paramongoloids. A normal chromosomal complement is compatible with the diagnosis of paramongolism, and hence that finding does not help a physician in delineating paramongolism from the "normal" state.

Mosaicism with a normal cell clone and a 21-trisomic clone can be found in mongols, in phenotypically "normal" individuals, and in paramongoloids. In fact mosaicism is relatively more frequent among the last of these—i.e. in cases where the diagnosis of mongolism may be in doubt. Several patients with Down's syndrome—chromosomal mosaicism and normal intelligence—have been reported. Personally, I am not convinced that mongoloid patients with normal intelligence quotients exist. I should be inclined to consider such individuals as paramongoloid, though I realize that in an exceptional case of chromosomal mosaicism, a sharp delineation between mongolism and paramongolism may be extremely difficult or even impossible.

There are difficulties with mosaicism, in addition to those having to do with clinical diagnosis. At times, actually, the recognition of mosaicism may be difficult. The cases studied in our laboratory and presented in Table 2 illustrate the prob-

TABLE 2

DISTRIBUTION OF EUPLOID AND ANEUPLOID CELLS IN MOSAIC MONGOLISM

Number of Cases	Number of Cells With 46 (euploid) Chromosomes	Number of Cells With 47 (trisomic) Chromosomes		
1	2 (7%)	25		
9	3 (6-12%)	23-54		7.4% of 190 examined cases
1	5 (19%)	21	2.1%	
1	6 (22%)	21		
1	19 (36%)	34		
1	16 (53%)	14		

lem. The last four cases listed there show chromosomal mosaicisms with 19 to 53 per cent euploid and the rest 21-trisomic cells. The diagnosis of mosaic mongolism in those cases is beyond doubt. They account for 2.1 per cent of the cases studied in our laboratory, and thus the incidence of mosaic mongolism in our case material corresponds closely to the incidences found in other laboratories.

Table 2 lists 10 further cases of mongolism. The majority of the cells in those patients were 21-trisomic, but two or three cells in each case were euploid without there being a supernumerary chromosome 21. If those 10 cases were also labeled "mosaic mongolism," the incidence would rise to 7.4 per cent, and such a rather high incidence of mosaicism calls for an explanation.

Two pathogenetic mechanisms can be visualized for the formation of a 46/47 (normal karyotype/trisomy-21) mosaicism.

(1) If, mitotic non-disjunction of a number 21-chromosome occurs during the early cleavage division of a karyotypically normal cell, one daughter cell with monosomy-21 and another one with trisomy-21 will result. The former, presumably not viable, will disappear, and a mosaic embryo with a euploid clone and a 21-trisomic clone will develop. Non-disjunction during mitosis is probably less frequent than non-disjunction during meiosis-1 of ovogonia, where the prolonged duration of synapsis (dictyotene) favors its occurrence.*

(2) Chromosomal mosaicism can originate from the loss of a chromosome-21 during an early cleavage division of an aneuploid, 21-trisomic zygote, as the result of which one daughter cell remains trisomic and the other cell displays 46 normal chromosomes. Further mitoses would lead to two clones with the respective chromosomal complements. This mechanism may be more frequent than the one described in the previous paragraph. Chromosomal analysis of spontaneously aborted material suggests that about two out of three 21-trisomic zygotes are spontaneously aborted. One could conjecture from this observation that nature has a tendency to rid itself of aneuploid zygotes. One wonders, therefore, whether a similar regulatory mechanism may be operative for parts of an aneuploid zygote—i.e. for individual aneuploid cells. In other words, is it possible that nature attempts to eliminate the supernumerary chromosome, at least in some cells, in order to reestablish euploidy? Such a hypothesis could best explain the frequent occurrence of mosaicism consisting of a large 21-trisomic and a small euploid clone. For the present, however, such an explanation remains highly conjectural.*

* The prophase of meiosis-1 of the ovogonia will already have taken place during fetal life. Homologous chromosomes synapse at that early age, and a modified synapsis persists for years and years until ovulation occurs, at which time the subsequent phases of meiosis-1 are completed. The longer the period in which homologous chromosomes remain in modified synapsis, the greater the risk of non-disjunction.

TABLE 3

RISK OF HAVING MONGOLOID CHILDREN

	Younger Mothers	Older Mothers
A. Risk of having ONE mongoloid child	Low	High
B. Risk of having a SECOND mongoloid child	High	Low

CHROMOSOMAL ANALYSES OF MONGOLOIDS BORN OF MOTHERS BELOW THE AGE OF 30 YEARS, AND OF THE PARENTS OF SUCH MONGOLOIDS

The higher incidence of mongolism in babies of mothers approaching the end of the childbearing period has been common knowledge since the last century. The risk that a mother over 45 years of age will bear a mongoloid child is at least 30 times greater than is the risk for a mother below 30 years of age. On the other hand, a mongoloid child born to a young mother has a several times higher risk of having another mongoloid sibling than has a mongoloid child born of an older mother.[9, 10]

As can be seen in Table 3, there must be at least two types of mongolism. (A) The more frequent form, and indeed the type encountered in about 90-95 per cent of all cases, is age-dependent —i.e. dependent on the age of the mother. Chromosomal analyses of these cases show a regular trisomy-21. (B) An age-independent type of mongolism is found only in a minority of cases, but in those instances there is a considerable risk of recurrence. This type can be separated into three sub-groups: Maternal trisomy-21; parental mosaicism; and familial interchange or translocation.

Mongoloid girls rarely become pregnant, possibly because they are relatively infertile, or perhaps because they are less sought after as mating partners. Births have been reported to have occurred to not more than a dozen mongoloid girls,

* Curtis, *et al.* (RADIAT. RES., **22**:730, 1964) presented experimental evidence showing that cells with chromosomal aberrations tend to eliminate their aberrations by several means, notably by mitosis. Such a mechanism, however, does not explain another observation that we have made frequently in our laboratory: In parents of 21-trisomic mongoloids, we quite frequently have found a mosaicism with a major euploid clone and a minor clone having an extra G chromosome. The latter clone is very small and consists of only one or two cells. It could be that the hyperdiploidy of these cells is artifactual, and hence insignificant. If, on the other hand, the presence of hyperdiploid cells is real, indicating parental mosaicism, trisomy-21 could occur in more than one child. In that case our eugenic counseling would have to be modified.

and those 12 have had a total of 16 children. Ovogonia of mongoloid girls are most probably trisomic for the number 21 chromosome. Meiosis of a 21-trisomic ovogonium may lead to a 21-disomic ovum (24 chromosomes) or an euploid ovum with only one number 21 chromosome (23 chromosomes). The risk of a 21-disomic ovum, and hence a 21-trisomic zygote, is 50 per cent. One might expect, therefore, that half of the children of mongoloid mothers would be mongoloid. Yet only five of the thus far reported 16 children born to mongoloid mothers were mongoloid, and 11 of them were declared "completely normal." Chromosomal analyses of spontaneous abortions, however, have revealed that about 25 per cent of the spontaneously aborted feti were karyotypically abnormal. With respect to mongolism, there is some evidence to suggest that only one-third of the zygotes with trisomy-21 reach the end of gestation. The above mentioned ratio—11 normal to five mongoloid offspring of mongoloid mothers—therefore is within the expected range.

A parent with chromosomal mosaicism who carries one clone with 21-trisomic cells runs a certain risk of having some gonadal cells with trisomy-21 as well. Meiosis of such gonadal cells again may lead to a presumably equal number of euploid and of aneuploid gametes. Hence parental mosaicism represents another cause of familial mongolism, though only a few such relationships have been reported.[11]

Familial balanced translocation or interchange heterozygosity represents a cause of the third subtype of age-independent monogolism. A compilation of the literature[12] has shown that 8.7 per cent of 630 mongols born of mothers below the age of 30 years, and only 1.3 per cent of 462 mongoloids born of mothers over 30 years of age had D/G or G/G interchanges, respectively. However, interchange mongolism can occur as a mutation, in which case it remains a sporadic manifestation. Actually, in only 10 per cent of the G/G and in 50 per cent of D/G cases does an interchange mongoloid have a parent with interchange heterozygosity. In such a situation, however, the recurrence risk of mongolism is considerable, as is shown in Table 4.

TABLE 4

RECURRENCE RISK OF MONGOLISM IN FAMILIES WITH PARENTAL INTERCHANGE HETEROZYGOSITY

Parental Interchange Heterozygosity (Translocation Carrier)	Recurrence Risk of Mongolism
15/21 and 21/22 Interchange	
Mother carrier	About 20%
Father carrier	Less than 20%
21/21 Interchange (or 21 isochromosome)	
Mother or father	100%

FAMILIAL MONGOLISM, AND IN PARTICULAR, FAMILIAL TRISOMY-21

Trisomy-21 can be found in several siblings, or it may occur in other close or distant relatives of a mongoloid proband. Investigations of familial mongolism in Iowa have yielded 10 sibships. In eight of those 10 instances there were two mongoloid siblings each, and in the other two instances there were three each. Moreover, in 14 instances mongolism was found in a first cousin, or an uncle, or an aunt of a mongoloid proband, and in 20 instances a second cousin of the proband or a first cousin of a parent of the proband was mongoloid. More distant relationships between two mongoloids were found in three instances. Some of the mongoloid cousins, uncles, aunts, etc., were maternal relatives, and others were paternal relatives of the proband. A familial pattern of trisomy-21 was found in 38 instances, or in the cases of about 20 per cent of all the mongoloids studied in our laboratory. That figure is by no means an accurate measure of the incidence of familial trisomy-21 in the mongoloid population of our area, for we karyotyped only a selection of our cases. Mostly familial cases and sporadic cases born of young mothers were studied, and sporadic mongoloids born of older mothers were not analyzed.

The occurrence of more than one case of trisomy-21 among second cousins or more-distant relatives may be coincidental. That possibility becomes obvious if one keeps in mind that the over-all incidence of mongolism is high—about one in every 600 live births. We asked the following question of our biostatistician, Dr. Paul Leaverton, "If the over-all incidence of mongolism is assumed to be 1 in 600 live births, what is the probability of two mongoloids' occurring in aggregates of 50, 100, and 200 people, respectively?" The answer can be found in Table 5. If one assumes that a medium-size kindred (first and second cousins, aunts and uncles included) totals about 100 people, one should expect to find two mongoloids among them (2 per cent).

That probability figure struck us as surprisingly high. We decided, therefore, to check it by studying a population other than the selected group

TABLE 5

PROBABILITY OF FAMILIAL TRISOMY-21: IF ONE MONGOLOID OCCURS IN 600 LIVE BIRTHS THE PROBABILITY OF TWO MONGOLOIDS IS

In Aggregates of	Probability of 2 Mongoloids
50 Individuals	Less than 0.01
100 Individuals	0.02
200 Individuals	0.06

previously seen in our laboratory. At two field clinics of the State Services for Crippled Children in southern Iowa, 149 parents who had brought in nonmongoloid children for the diagnosis and/or treatment of various pediatric and orthopedic ailments were asked whether they had mongoloid relatives. In six instances these people reported having a mongoloid relative. Once it was the proband's sibling, three times a first cousin, and twice a sibling of a parent of the proband. In other words, about four per cent of the patients had one or more mongoloid relatives. This finding indicates, then, that about four per cent of the wider families or kindreds in this area have mongoloid members, irrespective of the aliment of the proband who brought the family to our attention. These could include families where the proband, himself, is mongoloid. Therefore, if we substitute a mongoloid proband for the proband actually brought to one of the clinics, the likelihood of finding two mongoloids in a kindred is on the order of magnitude predicted by Dr. Leaverton's statistical computation.

From these considerations we can conclude, therefore, that the occurrence of two cases of trisomy-21 in a kindred may be merely coincidental in a fair number of instances. Random association, however, does not explain all cases of familial trisomy-21. Figure 3 shows four families, each one of which has more than one case of trisomy-21. In Family 1 (KU) a first cousin of the proband's father is 21-trisomic. As has been said, this could constitute a coincidental association of two cases of trisomy-21 in a kindred. In Family 2 (CWH) four patients with mongolism were observed. Two of them were karyotyped and revealed a trisomy-21. They are related to both the mongoloid male IIa and the mongoloid female IIIb, but IIa and IIIb are not related to each other. The occurrence of one or the other of them in this family must be coincidental. This observation calls for a careful pedigree analysis in every instance of familial mongolism. Nonetheless, the occurrence of three of the four mongoloids in Family 2 shows a statistically significant aggregation of cases. The four cases of trisomy-21 in Kindred 3 and the six mon-

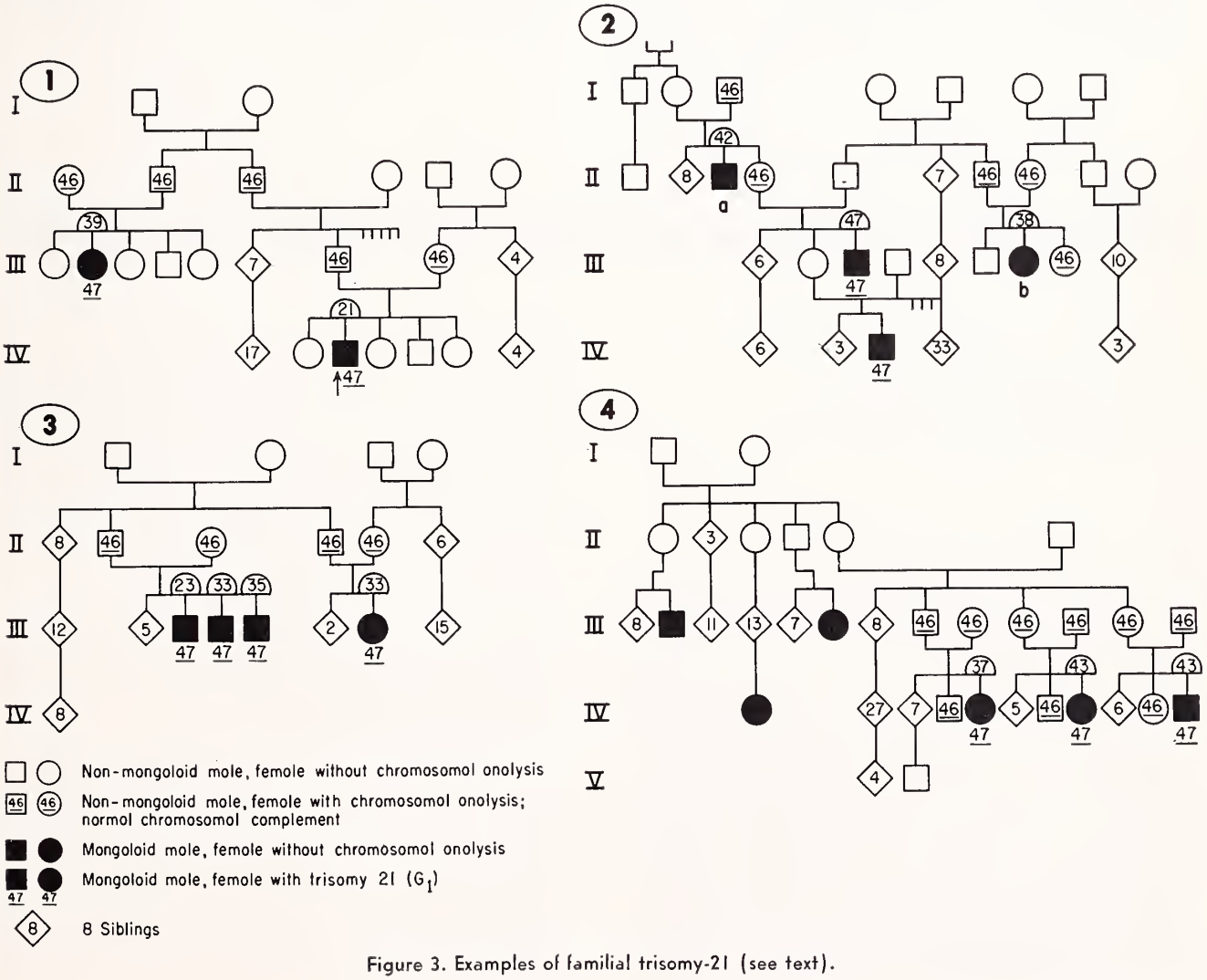

Figure 3. Examples of familial trisomy-21 (see text).

goloids (three of them proven to be trisomy-21 in Kindred 4 certainly are more than coincidental occurrences. The high incidence of trisomy-21 in these two kindreds and in Family 2 must have an explanation other than random association. We conclude, therefore, that some families and kindreds have a significant tendency to familial trisomy-21. The possible causes of familial trisomy-21 have been presented elsewhere.[14] Whether or not familial trisomy-21 is age-dependent hasn't yet been determined, and more material must be collected before that question can be answered. A careful history and chromosomal analysis is, however, mandatory for all such observations.

SUMMARY

Ideally, all cases of mongolism should be karyotyped, but technical considerations compel us, for the present, to limit chromosomal analyses to cases where the diagnosis of mongolism is in doubt, to mongoloids born of young mothers, and to instances suggestive of familial mongolism.

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A Radium Contamination Incident in Iowa

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A MINOR RADIUM-CONTAMINATION incident that occurred recently in Iowa has demonstrated that encapsulated sources should be surveyed periodically for radium leakage. Loose radium can be hazardous, and expensive to decontaminate. Therefore, it is imperative that radium be encapsulated in sturdy, leak-proof containers, and that it not be permitted to escape into the environment.

Because of the various external and internal forces that are constantly at work, a radium needle, plaque or cell occasionally cracks and permits radioactive material to contaminate a hospital, a clinic, an office or a home. In a particular instance in another state, radium contamination was so extensive that a $250,000 building had to be abandoned.[1] In order to prevent any serious health problems or financial losses, all radium sources should be checked to make sure they are not imperceptably contaminating their surroundings.

Messrs. Oppold and Pelland are staff members in the radiological health section of the State Hygienic Laboratory, and Dr. Campbell is director of the Industrial Environment Division of the Iowa State Department of Health.

SPECIFIC DANGEROUS FACTORS

Radium-226 is a naturally occurring radioactive isotope with a 1,622-year half-life. It is the parent of eight radioactive products before the decay series stabilizes at lead-206, and a period of approximately 30 days is required for these daughter radionuclides to reach an equilibrium with it. Radium-226 disintegrates by an alpha emission to form radon-222, which is an inert gas, but the other radioactive isotopes in the decay series emit alpha and beta particles along with gamma rays.

Chemically, radium is an alkaline earth found in Group II of the periodic table, along with barium, strontium, calcium, magnesium and beryl-

lium. It is used in medicine and in industry as a chloride, as a bromide or as a sulfate. The last of these is the most desirable, for it is insoluble, but many of the older radium capsules are filled with a soluble chloride or bromide.[2]

Radium is the most radiotoxic of the commonly used radioactive isotopes.[3] After it gains entrance into the body by way of either the gastrointestinal or the pulmonary system, radium is deposited primarily in the skeleton, for it is chemically similar to calcium. After radium becomes localized, its alpha bombardment produces significant biological effects in the bone, or in the epithelium immediately adjoining the sphenoid or ethmoid bones. It is reported that the simplest clinical sign which it produces is osteoporosis. The uptake of large quantities of radium, such as the New Jersey dial painters received after World War I, can produce manifestations including primarily osteomyelitis, spontaneous fractures, osteogenic sarcomas, and carcinomas of the paranasal sinuses or mastoids.[4]

As previously indicated, radium that has been sealed in a capsule builds up an internal pressure, and it follows that the longer the radium is encapsulated, the greater will be the internal force exerted upon the sealed container. In general, gases such as radon, helium, hydrogen and oxygen cause the internal-pressure to build up. The radon gas from a 1 mg. source will produce about 3.28×10^{-3} atmospheres per year. The emitted alpha particles neutralize by capturing electrons so as to form atoms of helium, and the pressure that this inert gas exerts accrues approximately 1.09 atmospheres each year from a 1 mg. source. The pressure from neither the radon nor helium ordinarily exceeds the tensile limits of a small-diameter needle, but the pressure added by the dissociation of any water molecules that may be present into hydrogen (H_2) and oxygen (O_2) will reach several hundred atmospheres, depending upon the amount of water that was encapsulated with the radium. The sum of these internal pressures, along with external stresses such as rough handling and heat applied for the purpose of sterilization, may cause a container of radium to rupture and leak. Radium or radon leakage not only produces a health hazard but also renders the source less and less capable of emitting the gamma-ray dose that is expected of it.[5]

THE IOWA INCIDENT

Not long ago, a case of radium contamination occurred in the office of an Iowa physician. Some radium plaques were taken from Iowa into a state which had leak-test regulations, and in that state a consulting health physicist found that the radium sources were leaking. Moreover, the storage container was contaminated, along with the automobile in which the radium had been transported. The health physicist reported his findings to the health department in his state; it, in turn, notified the U.S.P.H.S.; and the Iowa State Department of Health was eventually informed of the possible contamination in the office from which the sources had come.[6] The Iowa State Department of Health sent a survey team from the State Hygienic Laboratory to look into the situation, as an activity in the state radiological health program.

Residual radioactive contamination in the desk drawer where the plaques had been stored caused an Eberline PAC-3G alpha meter to respond with a reading of 70,000 counts per minute. A thorough investigation showed radioactivity on a variety of items located throughout the office and the adjoining clinical rooms. The upper middle desk drawer—particularly the paper-clip cup—and several small areas of the floor carpeting produced significant readings. Spots of contamination were found on lead diaphragms, office chairs, tape dispensers, file cards, journals, a laundry box, a lamp, tools, positioning pillows, scissors and desk supplies. Fortunately, many of those items had not been used by the physician, but like the radium they were articles which he merely had accepted as appurtenances when he purchased the premises four years earlier.

Decontamination is regarded as a responsibility of the owner, but in this instance the survey team agreed to assist in such activities so as to expedite the corrective measures. The physician offered to purchase new office furniture so that the contaminated pieces could be discarded. Most of the small articles and portions of the carpet that had been contaminated were placed in plastic bags for transfer to the State Hygienic Laboratory and subsequent proper disposal.

Private homes, other offices, a pharmacy and a Salvation Army warehouse were also surveyed on the chance that contaminated articles might have been carried to one or more of those places from the physician's office. Two stools which were found in the pharmacy—ones that had come from the physician's office—were the only items that showed signs of contamination, but those stools constituted evidence that radium or any radioactive material can be transported from one place to another, and that an incident in a restricted area is capable of developing into a public health problem.

At the Laboratory, analysis of the contaminated items by means of a 512-channel gamma-ray spectrometer provided sufficient data to prove that the contamination in the physician's office had been caused by radium-226, rather than by a radon daughter. Follow-up studies were not performed on the people who had been involved, since the levels of contamination failed to indi-

cate that any of them had incurred significant exposures.

SUMMARY

This incident in Iowa, as it turned out, was not serious, for though the physician's office was located in a large office-department store building, the contamination had not spread to other parts of the structure, and it is believed that none of the personnel sustained any significant uptake. Moreover, the decontamination was simplified by the complete cooperation of the physician. As we have said, he volunteered to discard his office furniture and permitted removal of the small items that had been contaminated.

Reports have been submitted regarding other radium capsules thought to have been lost, stolen, improperly stored or leaking.[7] The user can be expected to know about sources that have been lost or stolen, but often he is unaware that his radium has been improperly stored or that it is leaking and thereby contaminating the environment, as the above case demonstrates.

Unused radium sources should be adequately disposed of, and all sealed radium capsules should be checked for leaks every six months. Inspections of the sources could reduce radiation hazards for office, laboratory and hospital personnel, and prevent costly decontamination procedures.

If the users of encapsulated radium will carry out preventive measures now, they can reduce the possibility of a major catastrophe from occurring in Iowa!

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 466

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 26-year-old white married woman was admitted to University Hospitals complaining of weakness and easy bruising for one to two weeks. She had been well until one month before her admission, when she had developed generalized malaise. She had no cough, hemoptysis, fever, or joint complaints. A diagnosis of influenza had been made, at that time, and she had been hospitalized in her home town and treated with tetracycline for four days. Thereafter she had been relatively well until one week before her admission here, when she had developed petechiae and ecchymoses on her trunk and extremities. Other than those abnormalities and a generalized fatigue, she had no complaints. There was no history of blood loss. She had no history of anemia, easy-bruising or bleeding tendencies. There was no family history of bleeding. She said that she was allergic to penicillin, sulfa, corn products and tuna fish. She had used aspirin frequently for minor ailments. She had taken Enovid for one year. She had frequently used "4-Way Cold Tablets," and had recently been exposed to moth balls (naphthalene), a paint cleaner and a rug cleaner. She had never had a serious illness.

Physical examination showed a slightly obese, attentive white woman who seemed mildly depressed. Petechiae and ecchymotic areas were scattered over her trunk and extremities. Her rectal temperature was 101.6° F. Her blood pressure was 130/75 mm. Hg, and the heart rate was 80/min. and regular. There was no lymphadenopathy. Her liver and spleen were not enlarged, and her neurologic examination was normal.

The stool was of normal color, but was 3+ posi-

tive for occult blood. Blood studies were as noted in the accompanying table. Urinalysis showed 2+ proteinuria and 30-60 red blood cells per high-power field. The serology was non-reactive, the blood urea nitrogen, the creatinine and the electrolytes were normal, and the serum proteins, thymol turbidity, calcium and phosphorus were normal. The one-minute serum bilirubin was 0.2, and the 30-minute was 1.9 mg. per cent. The prothrombin time was 14.2 seconds, with a control of 12.8 seconds. A lupus erythematosus prep and a latex agglutination for rheumatoid factor were negative. Direct and indirect Coomb's tests were negative. Cultures of the blood and urine revealed no growth. Bone-marrow aspiration showed numerous megakaryocytes and a markedly reduced number of platelets. The red blood cells showed marked polychromasia and anisocytosis. Cell maturation was normal. Complete blood coagulation studies demonstrated a prolonged bleeding time, no clot retraction, a low two-stage prothrombin time and abnormal prothrombin consumption. The chest x-ray was normal, and the skull films were interpreted as showing a normal skull. Platelet agglutinations with the patient's serum and donor platelets plus phenacetin, Enovid, tetracycline, and aspirin were negative.

She was transfused, being given a total of five units of blood, and on the second day of her hospitalization, prednisone, 25 mg. four times daily, was started. She remained febrile, with temperatures up to 102.8° F., rectally. There was no evidence of infection. On the second hospital day she became quite depressed and withdrawn, and seemed to be confused. The blood urea nitrogen was 51 mg., and the creatinine 1.5 mg./100 ml. On the fourth hospital day, she became comatose and developed Cheyne-Stokes respiration. Examination of her eyes revealed papilledema and hemorrhages in the left fundus. Her neck was not stiff, but there was rigidity of her lower extremities, and ankle clonus was noted on the right. Her pupils were equal and regular, and reacted slowly to light. The deep-tendon reflexes were diminished, and no Babinski sign was present. During the last 48 hours of her life, she became hypertensive, her blood pressure reaching 160/130 mm. Hg. Her urine was dark in color and contained much sediment. She developed rapid, deep respirations, and continued comatose. She died on her fifth hospital day.

CLINICAL DISCUSSION

Dr. R. F. Sheets, Internal Medicine: The young woman whose case we are to consider today had an explosive onset of a fatal disease. I believe that this will be one of the most important CPC's of the current season. Mr. Trunnell will discuss the case for the junior ward clerks.

Mr. T. Trunnell, junior ward clerk: The patient was a 26-year-old white married woman who had been quite well until six months before her death. Our group believes that thrombocytopenia will prove to be the major finding, and I shall go through the clinical and laboratory findings in an attempt to show why we think so.

The patient had had an illness diagnosed as flu just six weeks before her death, although some of the criteria for that disease, such as general prostration, fever, and cough, were not present. She had easy-bruising, petechiae and ecchymoses, and gastrointestinal bleeding, which are signs suggestive of thrombocytopenia. Her first prothrombin time was normal. A bone-marrow biopsy was judged normal, except for decreased platelets and increased megakaryocytes. An increased bleeding time, no clot retraction, a decreased two-stage prothrombin time, and an abnormal prothrombin consumption indicate thrombocytopenia. Her peripheral blood counts showed a marked decrease in platelets. There was an anemia of the red blood cells, but her reticulocyte count was increased. The patient developed symptoms indicative of kidney failure—hypertension and proteinuria. Her BUN was increased, but her creatinine was not markedly greater than normal. The BUN increase might have resulted from her gastrointestinal bleeding, which released ammonia that afterward was reabsorbed.

There are two explanations for a low platelet count—either a decreased production of platelets, or an increased destruction of platelets. In a de-

LABORATORY DATA

Days	Hemoglobin	White Blood Cells	Platelets	Reticulocytes	Blood Transfusions
−40	15.0	15,300			
− 6	12.0		119,000		
− 1	7.5	11,500	16,000		
0 (Admission to U. I. Hospitals)	6.3	14,800	15,000		2 units
1	8.8		26,000	15%	
2	8.7	7,950	2,000		
3					2 units
4	9.6	14,450	32,000		
5	8.3		10,000		1 unit

creased production of platelets, there seems to be no indication of marrow replacement. This patient's marrow seemed to be normal except for the increased megakaryocytes. As for the possibility of aplasia due to a chemical or drug toxicity, we are told that the patient had been exposed to naphthalene and to carbon tetrachloride.

As for a tentative diagnosis, one possibility might be an idiopathic thrombocytopenia, a condition which is more common in children and premenopausal females than in women past childbearing age. Marrow in idiopathic thrombocytopenia shows an increase in megakaryocytes, as this patient's did, and idiopathic thrombocytopenia often follows an upper-respiratory infection, as it may have done in this woman.

Dr. Sheets: Dr. Hoak will discuss this case for the staff.

Dr. J. C. Hoak, Internal Medicine: There is no question that this lady had a platelet deficiency, and consequently I am forced into making a differential diagnosis of thrombocytopenia. Such a classification can be made in several ways. One can do it on the basis of whether there are normal or decreased numbers of megakaryocytes in the marrow. In addition, thrombocytopenia can be differentiated on the basis of the lifespan of the platelet.

Let us talk about the different types of thrombocytopenia. First, there is the amegakaryocytic type, in which there are decreased numbers of megakaryocytes in the bone marrow. In the second type there are normal or increased numbers of megakaryocytes in the marrow. Individuals exhibiting inadequate numbers of megakaryocytes have the congenital and the acquired types. The latter may result from a depression of bone-marrow activity caused, in turn, by drugs such as benzene, nitrogen mustard, chloramphenicol or other toxic agents. More commonly, it may result from the replacement of bone marrow by foreign tissue. This latter is the situation in such conditions as leukemia, lymphoma or other neoplastic disorders. A third and less common cause would be a deficiency of nutritional factors such as occurs in individuals with scurvy or pernicious anemia.

Now let's turn to the type of thrombocytopenia in which there are adequate or increased numbers of megakaryocytes in the marrow. Occasionally this condition is found in two or more members of a particular family. Dr. Henry E. Hamilton and Dr. Sheets have followed some very interesting patients with this disorder and have found that characteristically the patients experienced abnormal bleeding during pregnancy. There is also a neonatal thrombocytopenic purpura. It is usually found in the babies of mothers with idiopathic thrombocytopenic purpura, and it may last for several weeks following delivery, occurring even though the mother's platelet count is normal. In other words, thrombocytopenia may occur in an infant despite a normal platelet count in its mother.

There also are types of thrombocytopenia due to drugs that act as haptens, with the result that antibodies are formed. In such situations, of course, the drug must be present. Indeed in most cases it must have been administered for a second time. In such a situation, there is a tremendous drop in the platelet count, and diffuse bleeding may occur within a matter of minutes or hours. The drugs most commonly involved in this type of thrombocytopenia are quinidine or quinine, sedormid, and sulfa drugs.

We may also see thrombocytopenia due to hypersplenism. It is possible in individuals with portal hypertension, sarcoidosis, Gaucher's disease or disseminated tuberculosis.

Another important group of patients with thrombocytopenia are those whose condition, for lack of a better term, is called idiopathic thrombocytopenic purpura. That disease can be divided into two types—the acute and the chronic. The acute type may be associated with a hemolytic anemia, as was true of the patient whom we are discussing today. The simultaneous occurrence of these entities is called the Evans-Duane syndrome. If numbers of these patients with both hemolytic anemia and thrombocytopenic purpura are followed over the years, most of them will either turn out to have lupus erythematosus or thrombotic thrombocytopenic purpura.

I should like very briefly to review the data that have been given us regarding our patient today. She was a young lady with an allergic history, and she had developed an unknown type of illness one month before her admission here. To me, her allergic history means that she was extraordinarily susceptible to autoimmune diseases. On admission, she exhibited petechiae and ecchymoses. There were no enlarged nodes, and the spleen was not palpable. The hemoglobin was low, the indirect bilirubin was increased, and the reticulocyte count was high. As mentioned before, the platelets were decreased. The direct and indirect Coomb's tests were negative. It is important that the white count was elevated, for it showed her physicians that she did not have pancytopenia. Throughout her hospital illness, she had fever.

Her physicians were thinking of lupus erythematosus and other collagen diseases as possibilities, but the LE prep and the latex agglutination test for rheumatoid factor were negative. She also had red cells and protein in her urine. Her bone-marrow studies showed that she had a normal or an increased number of megakaryocytes, but few platelets were found in her marrow.

The red cells were said to be of varying sizes, but no mention was made in the protocol that this patient had helmet cells. Helmet cells are

deformed or distorted red blood cells which look like helmets, and they have been found in patients with thrombotic thrombocytopenic purpura. The first description of this kind of cell was in an individual who had a Teflon prosthesis in the heart. After the prosthesis was altered, it did no further injury to the cells, and most of the helmet cells disappeared.

The clotting studies were fairly straightforward. They were consistent with the diagnosis of thrombocytopenic purpura. I should correct one bit of misleading phraseology. The two-stage prothrombin is not a time. It is a determination in which one gets a value and compares it with the normal. I don't know what the actual value was in this case, but it can not have been diagnostic of thrombycytopenic purpura. If it was not extremely low, I think it must have suggested that the patient was a very ill woman whose liver function was not completely normal. It also may have reflected the effect of blood transfusions.

She did not have any evidence of platelet agglutinins. Depending upon which reports one reads, one can conclude that people with acute or chronic idiopathic thrombocytopenic purpura may have positive agglutinins against drugs or other agents in anywhere from 0 to 70 per cent of cases. Most investigations, however, indicate that 50 per cent of patients with idiopathic thrombocytopenic purpura have positive agglutinins.

This lady was quite anemic on admission. There was blood in her stool, as determined by chemical tests, but not enough to change the color of the stool. With her low hemoglobin level, high reticulocyte count and elevated bilirubin concentration, I believe her anemia was chiefly due to hemolysis, rather than to blood loss. She was treated with transfusions and steroids, which constitute the accepted therapy for a patient who at first appears to have an idiopathic thrombocytopenic purpura.

Then a significant development occurred on the second hospital day. She exhibited confusion. This condition became progressive, and on the fourth hospital day she was comatose and had Cheyne-Stokes respirations. Papilledema and hemorrhages were noted in the left fundus. The question for us to answer is whether that condition was papilledema, or whether it was thrombosis of the central retinal vein. As you know, papilledema is usually bilateral, but it may occur on the two sides at different times. We certainly must consider the possibility, however, that the eye findings represented thrombosis of the central retinal vein. The patient subsequently became hypertensive, and then her condition deteriorated and she died on the fifth hospital day.

I think this woman had one of two conditions. Either she had idiopathic thrombocytopenic purpura with bleeding into the brain-stem area, or more likely, she had thrombotic thrombocytopenic purpura with brain-stem thrombosis and associated hemorrhage. Criteria for the diagnosis of thrombotic thrombocytopenic purpura include fever, thrombocytopenia, hemolytic anemia, and neurologic symptoms. This patient had all of these. It would have been helpful if we could have had information obtained by lumbar puncture during the final few days of her illness.

In summary, my primary diagnosis would be thrombotic thrombocytopenic purpura with multiple thrombotic episodes, chiefly in the brain stem, and associated hemorrhage. I cannot rule out the possibility of infection, but from the evidence in the protocol, I don't think such a diagnosis is justified.

Dr. Sheets: She did not have a lumbar puncture. Her two-stage prothrombin was 65 per cent of normal.

Dr. Henry E. Hamilton, Internal Medicine: As far as the kidneys were concerned, Dr. Hoak, I notice that initially the patient did have albuminuria and hematuria, and that the platelet counts were at a functional level, so one might postulate, perhaps, that something else was going on in her kidneys, even on the day of admission.

Dr. Hoak: That hypothesis would fit with thrombocytopenic purpura. It has been described in these patients. There is also the uremic hemolytic syndrome, but it is usually a recurrent disease, and I doubt that it is what this patient had. I think it more likely that thrombotic episodes were going on in her kidney.

Dr. Sheets: Dr. Hamilton, do you have any comment on the helmet-cell possibility? Or about the burrs?

Dr. Hamilton: Well, I don't know exactly how often helmet cells or burr cells occur in this disorder. We haven't found them in great numbers of patients. In many cases of hemolytic disease, one can find some helmet cells, and I suspect that whether one finds them or not depends upon how hard he has looked for them. There is no question that some patients have tremendous numbers of them. They suggest injury to the local capillary bed by some foreign object such as a vessel graft or a mechanical heart valve. Cells are then subject to premature breakdown elsewhere, for example in the spleen. In thrombotic thrombocytopenic purpura, the life spans of normal donor cells transfused to these patients are, indeed, shortened.

Dr. Sheets: This patient underwent an x-ray of her chest, an x-ray of her skull, and an x-ray of her abdomen in this hospital, but they were all normal, and we do not intend to show them today unless someone particularly wishes to see them.

Dr. Givler will discuss the autopsy findings.

Dr. R. L. Givler, Pathology: The gross findings at autopsy consisted almost entirely of extensive and widespread hemorrhages. These hemorrhages were in the form of petechiae and somewhat

larger interstitial foci, and were most marked in the heart and gastric mucosa. The gastric mucosa presented diffuse petechiae and superficial areas of erosion, and blood was adherent to the erosion bases and was present in the gastric lumen. Blood was also present in the lumen of the small bowel, and the contents of the colon were black. The brain was grossly unremarkable on external inspection, save for some flattening of the gyri. Specifically, there was no evidence of uncal or cerebellar tonsillar herniation. On cut surface a number of petechiae from 1 to 2 mm. in diameter were located in the rostral portion of the pons and mesencephalon.

Microscopically this case presented widespread lesions typical of thrombotic thrombocytopenic purpura (TTP). A section from the brain illustrated the typical features of such lesions which characteristically involve arterioles and capillaries. The deposits at times completely occluded the lumen, but at other times the occlusions were subtotal and eccentric.

Such material is usually hyaline, but may be granular. There is a significant paucity of inflammatory cell reaction, even in cases not treated with steroids. The composition of this material has not been definitely determined. When the condition was first described, it was thought that it consisted of agglutinated erythrocytes. A late suggestion was that it consisted of platelets and if that explanation were found to be true, such a widespread platelet deposition might account for the thrombocytopenia in TTP. The material reacts positively to the periodic-acid-Schiff technic, but that test is by no means specific for platelets. Fluorescent antibody studies in 1957 by Craig and Gitlin were said to show that this material stained for fibrin and not for platelets.

An unusual feature of the involved vessels was the striking aneurysmal dilatation and thinning of the vessel wall. Whatever the nature of the initial "deposit" in the lesion, longitudinal sections of involved vessels indicated that some propagation of thrombotic material can occur at the sites of the lesions. In 1950, Gorr emphasized the occurrence of lesions within the walls of the arterioles; these nodular hyaline masses, which Gorr called prethrombotic lesions, were covered by seemingly intact endothelium. Gorr suggested that with swelling of these lesions, the endothelium ruptures and thrombosis then occurs. Examples of such intramural lesions were seen in the present case, but by far the commonest lesions were of the intraluminal type. These luminal lesions are usually covered by a surfacing layer of endothelium, the appearance being that of marginated and endothelialized thrombus.

Other slides showed the gastric erosions with hemorrhage and a number of associated vascular lesions in the lamina propria. It is likely that the erosions were secondary to the mucosal vascular lesions; however, such occluded vessels without erosion were seen in other areas of the intestinal tract in this case. The lymph nodes showed many of the vascular lesions, and in some cases they were hemorrhagic. Lymph-node biopsy has been used to establish the diagnosis of TTP by demonstrating such vascular lesions. Similarly, bone-marrow biopsy sections have been used to establish the diagnosis. The bone marrow in the present case did show instances of the vascular lesions, and also showed erythroid hyperplasia in keeping with the hemolytic anemia. Megakaryocytes were somewhat more numerous than usual in the tissue sections of marrow.

In summary, we interpret this case as one of thrombotic thrompocytopenic purpura. A discrepancy between the clinical neurologic involvement and the morphologic changes in the brain has been noted in a number of the reported cases of this disease. The terminal gastric hemorrhage was unusual for the condition.

Dr. Hamilton: As for the patient's allegedly prethrombotic lesion, which was observed several years ago, not all people are agreed that a manifestation of that sort is necessarily prethrombotic. Rather, some workers are sure it represents fibrin that has been laid down and epithelialized. How about that, Dr. Givler? After all, when we get material from these patients, most of them are dead. To postulate a prethrombotic lesion is pretty shaky business, I think.

Dr. Givler: Yes, that's true. In addition, some people have described changes in the endothelium unassociated with this deposit. An unusual aspect of these "prethrombotic" lesions, though, is that they are segmental on the circumference, and the elastic membrane may be intact, thus suggesting that the lesions aren't herniations.

Dr. Sheets: I think this case illustrates a great new mechanism in disease that has been recognized within the last few years. The generalized Shwartzman reaction (GSR) is not a new mechanism. Rather, it has been studied for nearly 100 years and investigators have gathered much information about it. As long as 50 or 60 years ago, much was known about this mechanism in the realm of obstetrics and gynecology. Its application to clinical medicine was limited, however. It was an advance in technics that made it more generally recognizable—the development of tests of the coagulation mechanisms. Examples of the GSR are now seen in obstetrics and gynecology, as I mentioned, and in pediatrics, surgery, renal disease, and hematology as well. Dr. Hamilton will try to put the facets of the GSR into a pattern so that we'll understand the composite, and then we'll let you ask questions again.

Dr. Hamilton: I'll try to "put this together." In considering this often-fatal disease of unknown

cause, we can concentrate upon two broad concepts that should help us to understand the biological phenomena which were unfolded here today. First is the concept of the generalized Shwartzman reaction—its equivalent in man characterized by the triggering of *intravascular coagulation*—and second is *hemorrhage* caused by excessive consumption of blood components.

As applied to the phenomena that have been described for us today, these two concepts really are closely related, if not actually interrelated, each being a part of the other. Work in experimental animals provides classical models for these two concepts. If we use a broad definition of the Shwartzman reaction in man, we can say that it occurs as an acute complication of an underlying, preceding disorder. Often there is an infection which acts as a triggering mechanism and sets off a chain of events. I shall give you a working outline of those events:

1. *Intravascular coagulation.*
2. *Thrombosis in small vessels leading to necrosis.*
3. *Hemostatic defect* (measurable).
4. *Generalized bleeding tendency.*

Thus the trigger mechanism is not a specific reaction. A portion of it sets off the intravascular coagulation, which is germane to the whole business. The next thing that occurs is thrombosis. As Dr. Givler pointed out, it takes place in the small vessels. With the thrombosis there may be necrosis; it may be ever so small, but it produces local cell damage. With the coagulation and thrombosis, there is a hemostatic defect that is measurable. There are certainly several items in the protocol which suggest this event, but we are not given a measure of fibrinolysis or of the fibrinogen level.

One ends up here with hemostatic defects and finally a playback to hemorrhage. There is thrombosis at one end, and hemorrhage at the other end. The latter may be due to incoagulable blood or to the activation, by this time, of the fibrinolytic system.

Certain observations and facts about the experimental Shwartzman reaction are certainly worthy of our consideration. Hundreds of articles have been written about the Shwartzman reaction, and certainly there is a lot of controversy among the immunologists and allergists about the interpretation of it. In the following brief review of the Shwartzman reaction as it occurs in the rabbit, please note that the process has two stages.

On the left side we have substances which prepare the host for the Shwartzman reaction. One can inject, let's say, gram-negative endotoxin, antibody-antigen complex or viruses to prepare for the local reaction. Note that there are several possible preparatory agents. What happens in this first reaction? Look at the right side of Table 1. There is some local inflammation; granulocytes are very important; and there is some local vessel injury to which fibrin may later adhere. In the generalized Shwartzman reaction, if one gives an intravenous gram-negative endotoxin, then in the first few hours a few fibrin thrombi will be found in various parts of the body, and that's all.

TABLE 1

SHWARTZMAN REACTION, FIRST STAGE

Preparation	First Reaction
Local	
Gram-negative endotoxin	Inflammation
Antibody antigen	Granulocytes
Virus	Vessel injury
General	
Gram-negative endotoxin	Few fibrin thrombi

In Table 2 we see the events of the second stage of the reaction.

TABLE 2

SHWARTZMAN REACTION, SECOND STAGE

Provoking	Second Reaction
24 hours later an intravenous injection	Intravenous coagulation
Endotoxin	Fibrin deposited
Antibody-antigen	Fibrin not cleared
Serum	Necrosis
Starch	Hemorrhage

Thus, 24 hours later, if one then gives the provoking agent intravenously—it may be endotoxin, it may be antibody-antigen, it may be serum or it may be starch—a profound reaction follows. Most importantly here, intravenous coagulation takes place and then fibrin is deposited, presumably on the injured vessel wall. Fibrin is not cleared at this time (and this is an important point, for if the fibrin were cleared from the plasma, the reaction would not go on); then there is necrosis and a hemorrhage.

If one considers these events, he can relate their sequence and kinds to the course taken by our particular patient. She had had some previous sensitizing or starting reaction, and the provoking reaction may have come along two or three weeks later. I have read this protocol over and I am still wondering whether the "flu" may not have been the preparing reaction, four weeks before her admission to this hospital. She was sick enough to be hospitalized in her home town.

She apparently didn't have hemorrhage at that time, and then later she was discharged feeling much better. Thereafter she became ill again. Something else had happened. I wonder whether a provoking reaction of some sort may have transpired, in the form of a developing antigen-antibody complex which in some way started this reaction—a generalized Shwartzman reaction, if you will. Whatever the triggering mechanism, it at least started intravenous coagulation.

We should state that in the experimental animal and in man this Shwartzman reaction depends upon an interaction of many factors. The basic ingredient is intravascular coagulation. On the other hand, intravenous coagulation does not produce this chain of events by itself. This probably is the reason why we do not see the fulminant disease very often in man. Then too, there is a great variability in the kind of reaction.

I want to present some of the interesting factors that are known to be operative in the experimental design.

TABLE 3

THE SHWARTZMAN REACTION IS DEPENDENT ON THE INTERACTION OF MANY FACTORS

1. Blood flow—decreased vasoconstriction, shock.
2. Leukocytes, blood-vessel injury, mucopolysaccharide.
3. Depressed fibrinolytic activity.
4. Blockade of reticulo-endothelial system, and fibrin and endotoxin removal.

There is no question that the development of a Shwartzman-like reaction is dependent upon blood flow. Vasoconstriction or shock decreases blood flow and facilitates the reaction. Dr. Hoak indicated that when the platelets are broken down they liberate serotonin, which in itself has a constricting effect. This may enhance a local lesion and deposit fibrin in the local vessels. Leukocytes have to be present for both priming and provocative reactions. Somehow the leukocyte granules are important in the initial portion of the priming reaction and the triggering mechanism; mucopolysaccharides must be present. In the experimental design one can accelerate the reaction by adding mucopolysaccharides to the system. Initially, there should be a depression of fibrinolytic activity. If there is a very good response of the fibrinolytic system, fibrin will be lysed as soon as it is laid down. No local lesion will then follow. Another point: the reaction is enhanced by a blockade of the R-E system or by a poorly functioning R-E system locally or generally. Ordinarily, the R-E system removes fibrin or altered fibrinogen which is on its way to fibrin and also removes endotoxin. Table 4 shows the ways in which the reaction can be prevented or decreased.

Heparin is very helpful in preventing or stopping the reaction, once it has started. Streptokinase also will activate fibrinolysis, lysing fibrin that has been laid down, so that the reaction does not proceed. Pretreating animals with nitrogen mustard, thus reducing the white-cell count (getting rid of the polys), prevents or decreases the reaction.

TABLE 4

Shwartzman reaction can be prevented or decreased by
- Heparin
- Streptokinase
- Nitrogen mustard

Shwartzman reaction is aggravated by
- Epsilon aminocaproic acid
- Corticoids
- Intravenous fibrinogen
- Thorotrast (reticulo-endothelial blockade)

The Shwartzman reaction is aggravated by epsilon aminocaproic acid, for the fibrinolytic system is quieted and therefore the fibrin that is laid down stays there. Adrenal corticoids, for some unknown reason, intensify the reaction, and intravenous fibrinogen makes it proceed very rapidly. It is interesting that if an animal is treated with thorotrast, blocking the R-E system, the reaction proceeds rapidly.

What are the human counterparts? We don't have time to go into all of the clinical details. Dr. Sheets mentioned a few of them, and Table 5 presents a list for your consideration.

TABLE 5

OCCASIONS FOR THE SHWARTZMAN REACTION IN HUMAN BEINGS

1. Accidental occurrence following intravenous typhoid-vaccine injections.
2. Gram-negative septicemia in pregnancy.
3. Renal-cortical necrosis after premature separation of placenta.
4. Fulminant meningococcemia.
5. Purpura fulminans in children following mild infection.
6. Acute pancreatitis.
7. Pseudomembranous enterocolitis.
8. Skin lesions of ulcerative colitis.
9. Pyoderma gangrenosum.
10. Toxemia of pregnancy.
11. Hemolysis—acute tubular necrosis.
12. Thrombotic thrombocytopenic purpura.
13. Certain malignancies.
14. Snake bite.

I shall now comment very briefly on the possibility of SR in each of the conditions that I have listed. (1) There have been some accidental

Shwartzman reactions following the intravenous use of typhoid vaccine; here's the gram-negative organism with its endotoxin. The reaction has occurred when typhoid vaccine was given intravenously on successive days. In one individual who was very carefully studied, "a generalized Shwartzman reaction" occurred on the third day. That patient had thromboses, hemorrhage and general lesions much like those described in the patient whom we have been discussing. (2) Gram-negative septicemia in pregnancy has been recognized. For some reason or other, pregnancy predisposes to an SR-like reaction in some patients. It is suggested that pregnant women do not activate the fibrinolytic system as well as normal persons do. (3) In renal corticonecrosis after premature separation of the placenta, there is an excessive consumption of coagulation components. The reaction starts with thromboses. (4) In fulminant meningococcemia, there are both a local Shwartzman reaction to the skin and a generalized one involving almost all the organs but with only a very small vessel involvement. (5) Purpura fulminans recently has been recognized in children as a classic model of localized SR lesions. Its progression has been stopped with heparin. (6-7) Some cases of acute pancreatitis and pseudomembranous enterocolitis fit the picture. (8) The skin lesions of ulcerative colitis have many of the overtures of the localized Shwartzman reaction. (9) Pyodermic gangrenosum also has many of the characteristics of the localized Shwartzman reaction. (10) The toxemias of pregnancy are interesting in this connection, for in such cases deposits of fibrin have been found in the small vessels. We shan't go any further except to say that these fit the concept. (11) We have known that acute tubular necrosis or lower nephron nephrosis has many causes. We know that one of the factors that is involved is hemolysis. We know that hemolysis and shock slow the blood flow to the kidney and that the red cells set the stage for a liberation of ADP, which facilitates platelet aggregation and leads to blood clotting. Then the circuit has been established for the laying down of fibrin in the small vessels and for tubular necrosis.

(12) We come now to thrombotic thrombocytopenic purpura, the disorder that we have been talking about today, and it certainly seems to fit into the framework of a general Shwartzman reaction. We've talked about the preparatory phase—the infection. Also, this girl took many drugs. Furthermore, she was allergic to many substances. All of these findings point to the possibility of an antibody-antigen complex to trigger the reaction. Now we certainly don't know what triggered the reaction here, but it is of interest that this lady had purpura, with an initial platelet count of 119,000/cu.mm. A hundred-thousand platelets certainly would not be a low enough number to account for hemorrhage on the basis of thrombocytopenia. Thus, I think this girl went on to thrombose smaller vessels and to utilize many of her coagulation factors—not completely, in all probability, but we really can't be sure, for nobody measured them in the last day or two of her life. So we are fairly sure that she had intravenous thrombosis and rapid consumption of the coagulation factors, and in particular we know that she ended up with no platelets, and then that the reaction concluded with hemorrhage and death.

Dr. Givler can't say that she had a massive hemorrhage, but I should like, if I may, to try to get him "off the hook." I'd like to suggest that the patient had many thromboses and hemorrhages in the very small vessels of the brain, with a laying down of fibrin which led to malfunction of the cells in the brain. Isn't this possible? I can accept it as a mechanism for death, particularly after your report of hemorrhages in so many of her organs. The question I raise is, "Why did she live so long?"

(14) It is of interest that the bites of some vipers produce effects that are identical with the picture we have been discussing here.

This whole story of hypercoagulation, followed by fluidity of blood, was described beautifully by Mellanby in 1908. His descriptions were lucid, and he gave physiologic explanations for the events which have been little improved upon during an ensuing period of nearly 60 years.

I'd like to say a brief word about management. We are interested in the management problem because we hope to be ready for the next patient who comes in here with this disorder. I might say that the condition was diagnosed on clinical grounds in this patient about 18 hours before her death. Steroids and ACTH in modest doses apparently are not helpful at all during its course. Large doses however—30 to 300 mg. of steroids—and splenectomy are thought perhaps to do some good. In one series of cases, nine of 46 patients survived. Currently available immune suppressant agents probably don't help here. Early heparin therapy has been followed by recovery, as the LANCET first reported about three or four years ago. I believe that all of the patients in whom the condition has been recognized here have died.

In general, then, this is a fatal illness. If we recognize it early, and with the background that we now possess, we shall use heparin in treating the next patient in whom we find it. Any of us who has occasion to suspect the diagnosis in one of his patients, should get a biopsied node over to Dr. Givler for immediate study. (Don't forget to mark the specimen "emergency" and to follow up on it!) In the presence of purpura, if the lesions can be seen, we'll have more basis for going ahead with heparin therapy.

Fibrinolytic agents have not been given a real-

ly good trial. There probably is a time when these agents might be used. I trust that the next time a patient arrives here with this peculiar disorder, first described by Moschowitz in 1925, we can get astride of the problem before fatal complications occur. Thrombocytopenia, purpura, fever, anemia, albuminuria, and progression in spite of steroid therapy—evidence that things just aren't going well, together with uncertainty about the diagnosis—these findings should tip us off, and we can only hope that the tip-off comes before CNS symptoms appear. We should be prepared to utilize the complete battery of coagulation tests and serial biopsies, and to study the lesions during therapy with heparin, to get an electron microscopic study of the eosinophilic hyalin-like material, to get a good idea of the location and amount of fibrin material present, to do as thorough immunologic studies as possible, checking immunoglobulins and various agglutination reactions against any historical evidence suggesting a drug or infectious-disease trigger mechanism, survival of the patient's cells in a normal recipient, SH content of red cells and fragility-protection with ATP, serial study of morphologic characteristics of the formed element of the blood as well as red-cell enzyme content, to mention just a few items. The references listed at the end of the published version of this report will provide a source of further information on the problems raised by the illness discussed today.[1-4]

Dr. Hoak, I might ask whether you'd like to say something about fibrinolytic agents, and whether they are of any use today.

Dr. Hoak: I don't have much to say about fibrinolytic agents, though we do have them available in this institution. Urokinase is the best drug of that sort which is available at the present time. We have a supply of it for clinical investigation, but it is not commercially available. Whether such a drug would be helpful in this disease is uncertain. It is an interesting concept, but I don't know of any studies in which it has been tried.

Dr. Givler: In tissue sections, at least, these deposits are not lysed by the enzymes that lyse fibrin.

Dr. Sheets: Dr. Hoak, heparin is the drug that should be used for treatment early in this disease in order to block coagulation, but if one sees a patient later on in the disease, after the hypercoagulability and actual coagulation have gone on for a period of time, the clotting factors in the blood become depleted. Fibrinogen, particularly, is used up, and the supply of it may be very low. At that stage there still may be considerable amounts of thrombin in the circulation. If one gives fibrinogen to a patient whose supply of that component is low but whose supply of thrombin is plentiful, massive coagulation occurs in his big vessels. Yet, if one knew that there was not a considerable quantity of thrombin circulating, he could go ahead and give fibrinogen. Is there any way that one can measure the thrombin content of the blood in one of these people many days after this process has started, in order to determine whether or not fibrinogen can safely be used?

Dr. Hoak: Probably a better example of the difficulty you have described would be the individual who has disseminated intravascular coagulation secondary to an obstetrical catastrophe or a disseminated carcinoma. In this case, we really have no evidence that the patient had intravascular thrombosis to the extent that her clotting factors were depleted. In fact, the clotting studies that were done do not support that idea, though it must be mentioned that the studies were performed after she had been given several transfusions. The problem in such patients is that of deciding whether to use heparin, fibrinogen, a combination of fibrinogen and heparin, or epsilon aminocaproic acid. I don't know of any hard and fast rules. I think one must take the individual situation, perform the appropriate studies, and then use his best clinical judgment. I believe it would be foolish to declare fibrinogen as "the" treatment for catastrophic bleeding in obstetrical patients or in individuals with disseminated malignant disease.

ANATOMIC DIAGNOSES

1. Thrombotic thrombocytopenic purpura.
2. Widespread small visceral hemorrhages.
3. Diffuse mucosal hemorrhage, with patchy superficial erosions, stomach.
4. Luminal gastrointestinal hemorrhage secondary to 3.
5. Erythroid hyperplasia, bone marrow.
6. Bilateral pleural effusion, with partial collapse, lungs.
7. Renal tubular degeneration, acute and patchy.

STUDENTS' DIAGNOSIS

Idiopathic thrombocytopenic purpura.

DR. HOAK'S DIAGNOSIS

Thrombotic thrombocytopenia.

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MERRY CHRISTMAS!

The personnel of the office of the Iowa Medical Society and of the JOURNAL wish you and yours a Merry Christmas and a New Year of good health and great happiness.

This is a time when we should set aside political differences and social conflicts so as to make this season a joyous one, and it is a time for all of us to unite in an effort to make Peace on Earth, Good Will Toward Men a reality in this confused and uneasy world.

ONOMATOPOEIA

A colleague and friend recently underwent an operation for the removal of a lesion that he strongly suspected was a malignant neoplasm. When he learned that the pathologist had decided it was not, he exclaimed, "The word *benign* is the sweetest word in the English language."

The spoken word *benign* has a euphoneous quality. Its sound, in addition to its meaning, is music to the ear. When uttered by the human voice, it has a gentle character suggesting mildness, kindness and innocence.

By contrast, the word *malignant* has a discordant quality as unpleasant to the ear as it is dolorous in meaning—a frightening word which no euphemism can disguise.

Yes, good friend, when one has been harassed by such an uncertainty, we all agree, "The word *benign* is the sweetest word in the English language."

BELMOND'S CATASTROPHE

Press reports have praised the manner in which the physicians of Belmond responded to the catastrophe which leveled a large part of the community, caused six deaths, and resulted in injury to some 200 people. Such well deserved praise reflects great credit upon our state president, Samuel P. Leinbach, M.D., and his colleagues and upon the Belmond Community Hospital and all of its personnel. The prompt response of physicians and nurses, the arrival of ambulances and the cooperation of hospitals in adjacent communities were important factors in the management of the emergency.

Fortunately, the physicians of Belmond and the Belmond Community Hospital had a well organized disaster plan, although so serious a disaster as occurred on the afternoon of Friday, October 14, had been unthinkable. As a result of the well-laid plans, the specific assignments of personnel and the drills which had been conducted, the critical emergency was handled with skill and efficiency.

Representatives of the American College of Surgeons have recenly made surveys in several states regarding the provisions for and the adequacy of emergency medical care. As a result of these studies numerous deficiencies were found. In many instances emergency entrances to hospitals have been found inadequate. For example, the approaches provided room for only one vehicle. Generally, the waiting rooms in emergency areas were entirely inadequate. Many emergency rooms were poorly equipped, in many cases because equipment that should have been there had been borrowed by other departments in the hospital. So-called emergency rooms were being used for routine outpatient and admission services. In some of the smaller hospitals, the attendant in the emergency room was untrained. Communication between nurses and administrative personnel and the doctor or doctors was frequently uncertain. Ambulance services, in general, were quite unsatisfactory; oxygen was not available in many of them; and frequently the attendants had received no training in first-aid. In some communities, despite the efforts of the state civilian defense organization and the state department of health, no disaster plan had been worked out. Surprisingly, in some of the smaller hospitals (25 to 30 beds) the facilities for emergency medical care and the disaster plans were far better than those of larger hospitals in larger communities.

The foresight, the skill and the dedication of the Belmond health team deserve special commendation. Belmond's efficiency should raise a question in the minds of citizens elsewhere, and particularly in the minds of physicians: "How well are we prepared to cope with a similar disaster in our community?"

HOPE FOR THE HUNGRY

The U. S. Department of Agriculture has estimated that the 1966 corn corp in Iowa is the largest in history, and that the yield will average 87 bushels an acre—five bushels per acre more than in any previous year. Since it has also been reported that the acreage allotments for next year are to be increased, even greater productions can be expected in succeeding years.

With an annual world population increase of 2.5 to 3.0 per cent, with famine endemic in large areas of the world, and with malnutrition the rule rather than the exception among children, it is encouraging to learn of the increased production of food to provide calories for the rapidly increasing number of people. Yet, though the grain yield in the United States doubled between 1943 and 1963, similar increases have not occurred in most of the "developing" countries of the world, and overall global

Editorials continued...

grain production has not kept up with the annual population increase.

A recent article by Dr. John M. Weir, Director of Medical and Natural Sciences at the Rockefeller Foundation,* points out that the majority of people throughout the world depend upon grains as their basic source of food. In Asia, cereal grains constitute 60 to 79 per cent of the caloric intake. Experts agree that despite modern agricultural technology, sufficient food cannot be produced to meet the needs of the increasing population. Unfortunately, moreover, most varieties of grain are deficient in total protein and in the essential amino acids for normal growth and development. Thus, even if grain production were sufficient to meet the caloric needs of the rapidly expanding population, there would continue to be protein deficits, in the diets of large segments of the human race.

A practical solution for the dietary-protein deficiency would be the development of varieties of grain containing adequate levels of properly balanced protein, and Dr. Weir tells of the efforts now being made to accomplish that objective. In 1964, through the combined efforts of geneticists and biochemists at Purdue University, there was developed a strain of corn, homozygous for the recessive mutant gene *opaque-2*, which has a lysine content of 4 per cent in its endosperm—twice the amount found in typical hybrid corn. In this newly developed strain, the zein (alcohol soluble) fraction of the endosperm contained 10 times the amount of lysine present in typical hybrid corn. In the following year the Purdue scientists reported the results of feeding rats the *opaque-2* strain of corn. In a period of four weeks, the rats fed the newly developed maize gained just under 100 Gm., whereas the control animals fed normal hybrid corn, gained 25 Gm. Such an accelerated growth would indicate that the endosperm of *opaque-2* corn contains an increased amount of tryptophan as well as lysine. Chemical studies also indicated an increase in the other amino acids. Only about a year ago the same group at Purdue University reported still another mutant gene, *fluory-2*, which increased the amino-acid content of the endosperm just as much as the *opaque-2* gene does.

The author points out that the research by the Purdue group is a major break-through in plant genetics. Through an increase in the production of cereal grains and through an increase in the total protein and a proper balance of essential amino acids, it offers great promise in overcoming the protein deficiencies of children in areas where grain cereals are the main source of calories. Similar genetic improvements in cereal grains such as wheat, rice, sorghum and millet, and in the legumes are well within the realm of possibility. In fact, according to Dr. Weir, at the Indian Agricultural Research Institute, one line of sorghum has been developed which has a protein content of 23 per cent. Although the amino acid content of this new strain has not been determined, this research has shown that genetic factors do control the protein level, and hopefully the pattern of amino acids as well.

To illustrate what impact an improvement in the quality of protein may have, the Rockefeller Foundation scientist uses the sorghum production in India as an example. He asserts that at the present time forty million acres in India are planted to sorghum, which is the basic food of a large segment of the population. The yield from those millions of acres is 9 million tons, most of which is consumed in the area of production. The indigenous variety of sorghum has a protein level amounting to 6 per cent of the weight of the grain. If the experimental line with a protein content of 23 per cent could be bred into a high-yielding variety of sorghum, the amount of protein would be increased by 1.3 million tons. In large measure, that change would correct the protein deficiency of tremendous numbers of the population.

The article by Dr. Weir contains exciting news. Research in the basic sciences has brought about great advances for the welfare of mankind. It is well within the realm of possibility that genetic improvement in grains will relieve the hunger of millions of people and prevent malnutrition for countless children.

* Weir, J. M.: Genetic improvement of protein in grains. J. AM. MED. WOMEN'S A., 21:743-747, (Sept.) 1966.

A PLEA FOR OPHTHALMIC TONOMETRY

In the September issue of TEXAS MEDICINE, Carroll W. Browning, M.D.,* a prominent Dallas ophthalmologist, makes a special plea for tonometer measurement of intraocular pressure as a part of the routine physical examination in all patients over 35 years of age. That test, he says, should be done by the general practitioner or internist, and need not be restricted to the eye specialist.

Dr. Browning states that it is a sad and entirely too frequent office experience for him to see, for the first time, an elderly patient who has lost a large portion of his field of vision in one or both eyes as a result of chronic glaucoma of 15 to 20 years' duration. Unfortunately, in chronic glaucoma an insidious loss of off-center areas of vision develops so gradually that the patient is unaware of the condition, and there is nothing to alert a physician to its presence.

He urges physicians who perform routine physical examinations to employ a suitable topical anesthetic in both of each patient's eyes, and then to

* Browning, W.: Ophthalmologist's plea to internist and gp. TEXAS MED., Sept., 1966, p. 38.

test the intraocular pressure with a tonometer. Finger palpation of the eyes, he contends, is completely unreliable as a means of evaluating intraocular pressure. The use of topical anesthesia and of the tonometer can be learned in a few minutes, and testing each patient requires less than a minute of the physician's time.

Dr. Browning believes that this examination would detect thousands of patients who are losing their fields of vision, as a result of chronic glaucoma, and that they then can be referred to ophthalmologists for further evaluation and treatment. In as much as most patients never see an ophthalmologist, but "buy glasses" from nonmedical practitioners, general physicians can do most to solve this problem, one of the most serious ones in sight conservation.

CIGARETTE SALES CONTINUE INCREASING

According to a report from the Iowa Tax Commission, the sales of cigarettes in this state during the first nine months of 1966 exceeded the sales in the same period of 1965 by 3,605,816 packs. Since a pack of cigarettes sells for 35 cents in the average retail store, there was an increased expenditure of approximately $1,262,000 for that form of tobacco in Iowa last year. In the first quarter of the fiscal year that began on July 1, the state cigarette tax collections totaled $6,346,891. (The federal tax on each pack of cigarettes is 8 cents, and the state tax is also 8 cents.)

The data reported by the State Tax Commission indicate that the warning printed on each pack of cigarettes and the efforts of the Surgeon General and public health authorities to point out the health hazards of cigarette smoking have been ineffectual.

Every physician can point to patients who have been operated upon for carcinoma of the lung, to others who have recovered from coronary occlusions and to still others who huff and puff and cough from emphysema, but cling to the cigarette habit. They refuse to stop smoking despite the advice of their physicians and all of the articles in the press pointing out the cause-and-effect relationship between cigarette smoking and disease. The habit has become so firmly established, apparently, that life without it must seem just not worth living.

Obviously a much greater effort must be made to prevent young people from starting a habit which is so deleterious to health and so difficult to overcome. County medical societies can make a generous contribution to the welfare of the people of their communities by conducting campaigns of prevention, but those campaigns must begin in grade school and must be repeated year after year.

It is time for every physician to ask himself, "What is being done in my community to convince youth of the folly and the hazard of cigarette smoking?" It should be possible to produce a sales pitch against smoking fully as effective as the Madison Avenue approach to the promotion of cigarette sales.

IN DEFENSE OF THE SINGLE-UNIT TRANSFUSION

Because a very critical attitude has developed in recent years toward single-unit transfusions, clinicians have become reluctant to administer blood to patients unless the indications clearly point out a need for multiple units. The critical attitude has been based upon the premise that the risks involved in the transfusion of a single-unit of blood exceed the risk attendant upon a failure to administer it. Also, it is contended, any patient whose need can be met by one unit of blood is no more in need of a transfusion than is the donor who has given 500 ml. of blood. As a result, almost every hospital has a transfusion committee to assure the proper use of this precious commodity.

Apropos the question of the single-unit transfusion, a report by the Transfusion Committee of Memorial Hospital, Pawtucket, Rhode Island,* an institution of 225 beds, is an illuminating one. It covered the year 1963 and involved a critical analysis of the records of the hospital blood bank and the clinical record of each patient who received a single-unit transfusion.

The objectives that the researchers were willing to accept for a single-unit transfusion were:

1. Restoration of blood volume to prevent or correct hypovolemic shock or to restore circulatory stability, particularly in surgical patients. Positive indications would include a falling blood pressure and an increase in the pulse rate during surgery, particularly when associated with blood loss.
2. Correction of chronic anemia, but only when symptoms are present.
3. Rare blood dyscrasias in which one unit of fresh blood would be effective.

Single-unit transfusions were considered indicated or not indicated on the basis of the above criteria, and a unanimous opinion of the four members of the committee was required. If the indications appeared doubtful or if the committee members disagreed, the need for the transfusion was classified as questionable.

During the 12-month period of the study, 1,449 units of whole blood were administered to 583 patients. Of the total number of patients transfused, 304 (52 per cent) received multiple units, and 279 (48 per cent) received a single unit of blood each.

In the judgment of the Transfusion Committee, 173 (62 per cent) of the 279 single-unit transfusions

* Micolonghi, T., Simon, S., Paul, A., and Healey, J. M.: Single-unit transfusion in community hospital—critical evaluation. RHODE ISLAND M. J., 49:533-536, (Sept.) 1966.

Editorials continued...

had been indicated. In 86 (30.8 per cent) a single unit was regarded as not indicated, and in 20 (7.2 per cent) of the cases the indication was classified as questionable.

More than half of the single-unit transfusions had been given on the general surgical service. Of them, 58.7 per cent were classified as indicated; 32 per cent were considered not indicated; and in 9.3 per cent the indications were thought to have been questionable. On the medical service 34 patients had received single-unit amounts of blood, and in 20.6 per cent of those cases a positive indication was thought to have been lacking. On both the obstetric and pediatric services, the administration of single units was judged to have been indicated in 94 and 100 per cent of 18 and 4 patients, respectively.

Among the 583 patients transfused, there had been 41 reactions (6.3 per cent). Thirty-two (10 per cent) of them had occurred in patients receiving multiple units, and 9 (3.2 per cent) in those receiving a single-unit each. However, incidences of transfusion reaction per 100 units of blood had been very similar in the two groups—2.7 per cent in those receiving multiple units and 3.2 per cent in those receiving a single-unit each. All reactions had been mild ones, such as urticaria, fever and chills.

In a discussion of their findings, the authors acknowledged that the number of single-unit transfusions had been high. Similar surveys in the literature have reported single-unit transfusion incidences varying from 18 to 55 per cent. However, the fact that only 30 per cent of the single-unit transfusions in this study were found not to have been indicated suggests that the staff physicians at the Pawtucket Hospital used blood judiciously and for positive reasons.

In stating the reasons for the large number of single-unit transfusions, the authors pointed out that several patients admitted with active gastrointestinal bleeding had stopped bleeding after one transfusion or had died before more blood could be administered. Six children had bled following tonsillectomy, and the bleeding had been controlled surgically after a single-unit transfusion. Many patients on the general surgical service and the surgical specialty services had undergone serious and extensive operations that are usually accompanied by a considerable loss of blood, but their operations had required only a minimum of blood replacement—often a single-unit transfusion. In some instances, in fact, it was the judgment of the Committee that the patients had been undertransfused.

Several transfusions which were judged not to have been indicated had been given to replace a minimal blood loss, and/or in response to slight changes in vital signs while the patients were undergoing surgery. A few had been given postoperatively to patients whose conditions were well stabilized, and it was the consensus that the transfusions had not been necessary.

The authors emphasize that risks are ever-present in blood transfusions. The most common risk is an immediate transfusion reaction which may by allergic, febrile or hemolytic. The possibility of the transmission of disease, particularly serum hepatitis, must always be kept in mind. Another hazard is the possible injection of red cell antigens. Usually they are not tested for, and they create new antibodies which may give rise to crossmatching problems in future transfusions. There also are miscellaneous hazards such as clerical and technical errors, circulatory overload, etc. which must never be forgotten.

From this study the Pawtucket physicians concluded that there is indeed a place for one-unit transfusions. They emphasized that if one unit of blood is sufficient to produce the desired result, it is a mistake to administer a second unit in an effort to escape the condemnation that attends the use of a single-unit of blood. What is important, they declared, is an improvement in total blood usage, rather than a decrease or increase in the number of single-unit transfusions. With improved transfusion practice, they predicted, there will be an increase rather than a decrease in single-unit transfusions and an overall decrease in "units per patient."

ROUTINE CERVICAL CYTOLOGY

For many years the Iowa Division of the American Cancer Society and the practicing physicians of the state have enjoyed great harmony. The activities of the Iowa Division have been concerned principally with securing professional and lay support for projects suggested by members of the medical profession.

In particular, the Iowa Division of the American Cancer Society has encouraged routine use of the Papanicolaou technic in cervical-cancer case-finding, and it has distributed kits to physicians besides conducting educational campaigns. Pathologists have prepared themselves for their share of the work, and have trained cyto-screeners. Specialists of various sorts and general practitioners have responded well, but as yet they have made no more than a good start at the tremendously large and very important task.

Cervical cytology is now accepted as worthwhile for routine use, but current statistics indicate that only about 12 per cent of Iowa women in the cervical-cancer age group have had cervical smears examined even once. It is also significant

that in some communities women have shown greater interest in undergoing the test than their doctors have shown in performing it.

Some doctors and some governmental officials have urged the enactment of either rules or laws requiring a cervical-smear examination for every woman 25 years of age or more who is admitted to a hospital, unless one has been performed on her during the previous 12 months. Indeed there are a few Iowa hospitals where medical staffs have established such rules, and the Iowa Chapter of the American Academy of General Practice is cooperating with its parent organization in a program calling for three to five groups of eight to fifteen of its individual members to secure cervical smears from as many as possible of their patients during a one-year program, and for them to keep careful records throughout a five-year follow up on each woman whose smear has shown a malignancy.* Thus far, no laws have been passed that require routine cervical smears.

The Iowa Medical Society's Committee on Exfoliative Cytology and the Iowa Division of the American Cancer Society again urge Iowa physicians to make full use of the cervical smear for the diagnosis of cancer. It is an office procedure, and physicians should do it in their offices. But certainly every doctor should see to it that a smear examination is done on each female over 25 years of age whom he admits to a hospital, unless she has had one during the previous year. Through greater use of this technic in doctors' offices and in hospitals, we should achieve one of the highest rates for this type of examination in the United States. Our voluntary efforts should make it clearly unnecessary for the federal government to manage or to subsidize a screening program of this sort in Iowa, and above all, our efforts should go far toward reducing the incidence of carcinoma of the cervix in our state.

—K. R. CROSS, M.D., *Chairman*
IMS Committee on Exfoliative Cytology

The IMS Grievance Committee

Over the years of its existence, the IMS Grievance Committee has handled a diversity of complaints from patients, physicians, insurance carriers and the State Board of Medical Examiners. A predominant number of cases have concerned medical and surgical fees, yet quite a few have been of a more involved nature, dealing with professional ethics and conduct, and the gray area of misunderstanding that is fertile ground for malpractice suits. Although each case can be evaluated only in the context of all its factions and factors, and thus the problems defy cataloging, an underlying pattern can be discerned. Therefore the profession should be introduced to some of the difficulties that have seemed more or less typical, ones which any physician might encounter, and thus it can be forewarned of the possible consequences. The proverbial "ounce of prevention" is certainly worth the effort that it costs, for "a pound of cure" may not be nearly enough.

In future issues of the JOURNAL, though anonymity will be carefully preserved, some typical Grievance Committee cases will be abstracted, and the Committee's commentary will be appended to each of them.

This preamble should review the functions with which the Grievance Committee has been charged by the By-Laws of the IMS. The Grievance Committee is a fact-finding body comparable to the grand jury in our judicial system. Complaints have to be submitted to it in writing. The parties to each disagreement are asked to sign waivers concerning medical, hospital and accounting records, thus allowing a fair and impartial collection of the facts.

Under no circumstances will the Committee handle cases when court action has been planned or has been instituted. Arbitration upon a reasonable basis is always attempted. If a serious breach of conduct or ethics is uncovered, the facts are reported to the IMS Judicial Council, and it is that body which takes final action. Whenever possible or necessary, hearings are held so as to bring to light all sides of the question at issue. The Grievance Committee's records are inaccessible to the staff and to physician members of the IMS, other than members of the Committee, for all Committee correspondence and minutes are kept by the secretary of the Committee. Closed cases are filed, for safekeeping, at the office of the IMS. The legal counsel of the IMS is consulted when matters of legal concern have been presented to the Committee.

Staggered membership terms preserve continuity of Committee procedure, and regional representation is assured by the fact that each councilor district is entitled to one member on the Committee. Actions by local grievence committees are welcomed, for many complaints can be handled more expeditiously at the local than at the state level. In some instances the IMS Grievance Committee has effectively handled appeals from decisions of local committees, but the most important things we have discovered have been our limitations. And therein lies an important lesson for doctors: If a complaint is brought against you, do your best to resolve it personally. Once it gets as far as a grievance committee, you may have said "Good-bye" to your patient and your fee, and sometimes you may be faced with a costly court action.

F. O. W. VOIGT, M.D., *Chairman*

* Cervical-cancer detection project for GP's. J. IOWA M. SOC., 56:296, (Mar.) 1966.

President's Page

Part B of the Medicare Program provides the first extensive application in Iowa of the "usual, customary, and reasonable" fee concept. The Iowa Medical Society and its members have long strongly endorsed this method of fee determination.

Recently the first accumulation of Medicare billings has been received by Blue Shield, the Iowa Part-B Medicare carrier. A few of those billings—ones requiring further evaluation before payment—are being sent to the claims review committees in the involved counties for final determination as to reasonableness. Staff members from the Iowa Medical Society headquarters are visiting the various counties to help develop county claims review committees on a uniform basis throughout the state.

Whether the "usual and customary" system succeeds is dependent upon how adequately each county claims review committee performs its role in reaching equitable decisions regarding the claims referred to it. More important to its success is the conscientiousness of each physician in keeping his fees reasonable. The "usual and customary" fee concept has much to offer and will work satisfactorily if we choose to make it do so.

D. P. Leinbach

President

Summary of 1966 Iowa Medical Society Fall Conference

The 1966 Fall Conference for County Medical Society Officers was presented in Des Moines on Sunday, September 18, by the Iowa Medical Society to bring to Iowa physicians up-to-date information on important matters which either are affecting or will have an effect on the practice of medicine in this state.

Apathy or Action! !

S. P. LEINBACH, M.D., Belmond
President, Iowa Medical Society

Today our country shows symptoms of grave illness, Dr. Leinbach suggested in his keynote remarks. Apathy and indifference are clearly visible in our time he declared, and he underscored his thesis by referring to divergent attitudes toward the struggle in Viet Nam; to the lack of fiscal integrity at various governmental levels; to the tremendous increase in juvenile delinquency; to the breakdown of our nation's moral fiber, and to the diminishing identity of the individual.

The medical profession has a great opportunity to produce change. No other group or profession, Dr. Leinbach said, has daily contact with so many people at the person-to-person level. In conversations with patients, which do not need to be lengthy, doctors can be a force for the good of the country.

Commenting on progress in the medical field, Dr. Leinbach noted the advance of automated data gathering and processing equipment, and stressed the increasingly important bearing it will have on all aspects of medicine. He referred to the team approach to the diagnosis and treatment of illness. This innovation, and others, can be good, he said, provided that the rights and dignity of the individual are preserved.

The initial months of Medicare Title 18 operation have been filled with many problems—for patients, for physicians and for the government. Dr. Leinbach challenged the medical profession to remain watchful for pitfalls in the program, ones which may bring patient-physician relationships virtually to an end. He referred to Title 19 of Medicare as the big brother of 18, and a program destined to go far beyond Title 18 in providing services and goods. He indicated that Title 19 can become the most dangerous and damaging social legislation ever enacted in this country. He expressed fear that our young people, lacking in examples of self-sufficiency in their elders, will become increasingly parasitical, and ever more demanding of governmental handouts.

The Iowa Medical Society, Dr. Leinbach explained, through its Committee on Legislation and its Subcommittee on Public Assistance, will present its position clearly and forcefully with respect to enabling legislation for Title 19 in Iowa.

He concluded: "I feel strongly that we physicians must always protect the rights of our patients and do all we can to enhance the effectiveness of health care. Our concern should be totally unselfish—not motivated by personal gain, but always devoted to the good that we can do as a profession and as individual physicians. Our responsibilities are tremendously great, but the future of our nation and the continued effectiveness of medical care rests on the shoulders of each one of us. Each of us, in many ways, is fortunate in having become a physician. Certainly our satisfactions are many. In concluding, I quote from Luke 12:48: 'Everyone to whom much is given, of him will much be required.' "

Two Sides of the Coin— Medicine and the Press

HARRISON WEBER, Des Moines
Iowa Daily Press Association

Mr. Weber explained that the Medical-Radio-Press Code of Cooperation was created in 1949 by representatives of the medical profession and of the press and broadcast media. Since then, the Code has been reprinted several times, but according to a recent survey, familiarity with it among news personnel is apparently at a low point. Thus we come to the question of whether it would not be advisable to update and redistribute the Code within the near future. This possibility is now under study. Based on a recent informal survey of newspaper editors, Mr. Weber reported, it seems that there are some unsolved problems in Iowa having to do with collecting and disseminating of medical news.

ED HEINS

Des Moines Register

Mr. Heins indicated that in his experience there has never been any significant conflict between the press and the medical profession. Medical jargon, he suggested, is not easy for the general reporter to handle, and consequently it tends to frighten away the "weak of heart."

More or less naturally, he said, physicians and reporters differ regarding the public's right to learn information about the ailments of individual patients, and he suggested that the doctor sometimes is overly reticent about releasing even a comment on the condition of a patient. But, he conceded, the doctor's primary responsibility is to his patient, not to the town newspaper.

In contrast, Mr. Heins called attention to the fact that medical societies are far from reticent about advancing the profession's views on socio-economic matters relating to medicine. Though there are many people, he suggested, who think that the infallibility of doctors does not necessarily extend into the political field, he was not disposed to question the right of physicians to express their opinions on public issues. He commented only that doctors should not feel especially abused when their adversaries do likewise, or when patients accept their medical diagnoses and programs of treatment, but fail readily to adopt their points of view on socio-economic matters.

JIM REED, Director

Communications Division
American Medical Association

The press wants news about medicine because the public wants it, Mr. Reed declared. By every test, items about health and medicine rate at or near the top in terms of reader interest. On the other hand, he contended, medicine needs the press to interpret its discoveries and to disseminate health information for the benefit of the public.

Physicians and newsmen agree that the public is entitled to have medical news fairly and accurately reported and within the bounds of good taste. They differ in that the physician serves just one individual at a time; his relationship with each patient is a sensitive, personal one; and he makes his decisions within the confines of ethical and professional standards. The journalist has a relationship with listeners or readers which, though indirect, is highly influential. He places a high value on the wide latitude given him in the name of freedom of the press, and he is committed to "the public's right to know." So sometimes a clash develops between the newspaperman who seeks to defend that right and the physician who is equally committed to defend his patient's right to privacy. Both views have their places.

What can the doctor and the medical society do to enhance understanding and cooperation between medicine and the press? Mr. Reed suggested they must practice "good PR"—"P" for *performance,* and "R" for *recognition.* Sound public relations are built of good words and on sound communications practices.

According to Mr. Reed the elements most important to a doctor's "PR" are: (1) good medicine, (2) wise handling of fees, (3) discussion of fees in advance, (4) convenient paying arrangements for patients, (5) efficient scheduling of appointments, (6) arrangements for constant coverage of the practice, (7) complete explanations whenever possible, of what measures must be taken and the reason for each of them, (8) acceptance of an added measure of citizenship, (9) adoption of a courteous and truthful attitude in contacts with newsmen, and (10) when necessary, sharing problems with the public relations committee of the county medical society.

In summary, according to Mr. Reed, the medical society should take pains to show the public that its activities are dictated by a desire to serve; that all of its programs are in the public interest; that its affairs are managed in a way that is fair to everyone; and that it is making a contribution to the society of which it is a part. County societies, he said, should have emergency-call systems and grievance or mediation committees that render fair decisions in medical disputes.

With respect to good relations, he emphasized, there is no substitute for meetings of doctors, newspapermen and commentators so that they can get acquainted with one another and learn one another's problems and responsibilities. A written, formalized Code of Cooperation is not enough, he declared. It must be a working agreement. The joint efforts of all concerned are necessary if the desired degree of understanding is to be achieved.

ROBERT SPIEGEL, Editor

Mason City Globe Gazette

Mr. Robert Spiegel asserted that there must be constant communication between newsmen and health-care personnel, if they are to achieve and maintain good relations. He cited illustrative incidents from his 17-year career as a reporter for the DES MOINES TRIBUNE and from his three years' experience as editor of the Mason City paper. He recalled a time when a thorough discussion by the concerned parties resulted in improved transmission of reports from Iowa Methodist Hospital, Des Moines, to his newspaper. He reviewed current discussions in Mason City having to do with printing the names of patients in local hospitals. In his judgment, the use of names in this manner is less than a life-and-death matter, and if indeed the routine printing of such a list constitutes an infringement on privacy, he is perfectly willing to abandon the thought. The point he stressed is that friendly discourse between the interested parties is all-important. He suggested the Code of Cooperation has served well, adding that when

things are progressing along a smooth course the Code is forgotten, but when the waters begin to ripple or a problem occurs, it becomes a handy reference document. He endorsed the expressed desire to revise and redistribute the Code.

HERMAN SMITH, M.D.

Des Moines

Dr. Smith suggested, through the use of several slides depicting portions of a recent newspaper story, that inaccurate and misleading presentations do find their way into print. He referred to a banner headline—"SET PROBE OF DOCTORS' FEES"—and contrasted it with passages in the story beneath it. The story described the rise in the cost of total medical care, and noted that factors other than physicians' fees had been largely responsible. Hospital costs, Dr. Smith said, are the big items in rising medical expenditures because the wages paid to labor are going up. The new minimum-wage law, he reminded his audience, is going to make hospital costs rise even further. In the last 20 years, the physician's share of the health-care dollar actually has dropped from 28 to 27 cents, whereas other items, notably hospital costs, have increased. Dr. Smith theorized that at least 50 per cent of newspaper subscribers look at a headline, such as the one he had used as an example, and neglect to read the story; in such instances, the doctor becomes the "fall guy."

The problem or conflict between newsman and doctor stems from a fundamental difference in their mission, according to Dr. Smith. The physician comes to focus on a single person, whereas the communications people are concerned with delivering their product to a wide group of consumers. The physician, he said, has two broad areas where he must meet and deal with the press. The first contains the educational, the public-health and the socio-economic activities of medicine. There are relatively few conflicts about them. Deadlines are not very important in matters of that nature, and writers of material in that area are frequently knowledgable regarding scientific matters. Then, too, in that area physicians are generally less wary of running afoul of the law governing privileged communication. But when it comes to spot news dealing with individual patients, misunderstandings multiply under the pressures of deadlines on the one hand, and professional ethics and liability on the other.

Unquestionably, Dr. Smith concluded, there is a need for greater understanding between these two estates. The physician must recognize the increasing public interest in health matters—part of it stimulated by the rise of the voluntary health agencies and part by the increasing intervention of government in the delivery of health services. The newsman, for his part, must understand the physician's obligation to respect the privacy of his patient.

Year of Dedication

K. K. HAZLET, M.D., Dubuque

Vice-President, IMS

Dr. Hazlet reviewed the activities occasioned by the Iowa Medical Society's move to its new headquarters building in West Des Moines. He suggested that the word "rededication" might be an appropriate designation for them—rededication of the IMS membership to study, to research, to teaching and to the everyday practice of medicine; rededication to preventive medicine and public-health measures. He reviewed the activities of the year: Dedication of the Walter L. Bierring Memorial Room on April 23; the Time Capsule Burial on July 14; the Formal Dedication of the building on October 9; the Hall of Health project at the Iowa State Fair; the Senior Medical Day to be held in Iowa City on January 28, 1967; the Hawkeye Science Fair to occur in Des Moines on April 7 and 8, 1967; and finally, the series of public lectures at the new headquarters building planned for the winter months of 1966-1967 under the auspices of the Iowa Medical Foundation.

Dr. Hazlet reminded county society officers of the open invitation that had been extended to them to use the new headquarters building at any time during the year for a regular monthly meeting.

Rural Health

J. W. GAUGER, M.D., Early

Chairman, IMS Rural Health Committee

Dr. Gauger reported that one drop of some organophosphate pesticides taken internally or introduced into the eye can be fatal within a short period of time, and thus that these agricultural chemicals are matters of concern to all physicians, both urban and rural. He pointed out that the Iowa State Department of Health, the Institute of Agricultural Medicine, at the University of Iowa, Iowa City, and certain responsible chemical manufacturers have attempted to alert physicians by means of direct mailings and publications. The Extension Service at Ames, he said, is warning farmer-users by several methods.

The IMS Rural Health Committee, on instructions from the 1966 IMS House of Delegates, is urging county medical society program chairmen to contact the Institute of Agricultural Medicine regarding dates for the appearance of its representatives at meetings of their respective organizations.

This new cause of death can be an area of particular concern for those physicians who serve as county medical examiners.

You may be certain, Dr. Gauger admonished, that insecticides and pesticides are here to stay. There are no safe insecticides or pesticides; there are only safe uses for them.

KEITH LONG, Ph.D., Iowa City, Chief
Environmental Toxicology Section
Institute of Agricultural Medicine
University of Iowa

The Institute of Agricultural Medicine, Dr. Long said, is dedicated to the study of the occupational ills of the agricultural worker. The organophosphate pesticides coming into prominent use in Iowa have become a matter of particular concern. In 1961 these items made up only 3.2 per cent of pesticide production, yet they caused more major problems than any similar products did. Dr. Long said the medical profession needs *especially* to be informed about the interaction and consequent potentiation of organophosphate compounds when used by people who are taking medications of certain sorts. The organophosphate compounds become biologically active after transformation in the liver, they are oxidized by the liver microsomes to a more toxic function, and many of the drugs used in therapeutic medicine accelerate this process to a great extent.

Dr. Long reviewed some of the findings in studies relating various pharmaceuticals to the organophosphate compounds, and he suggested that various subtleties are creeping in. But this Fall Conference report, he said, was intended merely as an indication of the Institute's desire to share its information with the medical profession.

The Institute will be pleased, he said, to present materials at county medical society meetings, whenever it is invited to do so.

Areawide Planning

H. L. SKINNER, M.D., Carroll
President, Health Planning Council of Iowa

At the urging of the House of Delegates, the Iowa Medical Society has spearheaded development of a voluntary areawide health facilities and services planning agency. It is named the Health Planning Council of Iowa, and consists of representatives from various professional, voluntary health, governmental, educational and business groups. Its formation reflects the belief that adequate planning on a voluntary basis can play an important role in holding down the costs of medical care through better distribution and more effective use of health facilities and personnel.

At the time of the Fall Conference, Dr. Skinner noted, 26 organizations had each paid $50 membership dues. The Council has established a number of subsidiaries such as an Evaluation and Projects Committee, a Finance Committee, a Regional Planning Committee, and a Publicity and Education Committee. The first of these groups will investigate, coordinate and evaluate sources of information. It expects to survey health and other appropriate organizations to obtain material pertinent to areawide planning, and it plans to publish a pamphlet for interested societies and individuals.

The Finance Committee will study money-raising technics, so as to facilitate the employment of administrative personnel. For the present, the Council is utilizing the facilities of the IMS, as well as the services of IMS staff members, in conducting its affairs.

The Regional Planning Committee will attempt to stimulate the creation of regional councils. It expects to develop a model program that interested groups throughout the state can use for that purpose.

The Publicity and Education Committee has as its immediate objective the development of a brochure to tell the story of HPCI.

The Governor's designating the Iowa State Department of Health as the agency responsible for comprehensive health planning has been made known to the Council, and the possible consequences of that action are being considered. The federal legislation leading to that designation by the Governor included provisions for a "state health-planning council" which in Iowa would advise the State Department of Health regarding the distribution of health-care facilities and personnel. It is possible, Dr. Skinner said, that the 21 members of the HPCI Board of Directors may serve—as individuals rather than as HPCI representatives—on such a state planning council. Other individuals would also be designated by the Commissioner of Health to serve on the state council. Even if that possibility materializes, he asserted, the HPCI intends to continue functioning as a separate and private entity.

In concluding, Dr. Skinner emphasized that the HPCI is dedicated to the concept of voluntary areawide planning, and he declared that with support from the IMS and similar private groups, the Council will play an important role in controlling health-care costs through objecting to expensive duplications of facilities and services.

Blue Shield

WILLIAM A. GUY, Acting Executive Director
Iowa Medical Service*

Mr. Guy said he believes that the concept of usual-and-customary-fees has been the most significant development in Iowa Blue Shield. The Ford Motor Company, he said, has accepted the usual-and-customary-fee approach for its Iowa employees. He added that this is the only area in the country where the union representing Ford employees has permitted a Blue Shield Plan to administer a program of this type. The Federal Employees' Program covering nearly 40,000 Iowans will also be on usual-and-customary-fees, effective

* Mr. Wm. Recknor has since succeeded Mr. Guy as head of Iowa Medical Service.

January 1, 1967. Mr. Guy said that in his opinion, if the medical profession makes this program work satisfactorily, there is little question that every subscriber in the Iowa Blue Shield organization can be on a usual-and-customary-fee program in the course of just a few years. He indicated further that once again Blue Shield can and must become the real leader in the field of medical-care prepayment—not the leader just in numbers of persons covered, but the leader in ideals, ideas, programs, concepts and social achievement.

Concluding his service as acting executive director of Blue Shield, Mr. Guy expressed heartfelt appreciation to those who had made it possible for him to serve in that capacity. He asserted his belief that during his tenure of office, the character of Blue Shield had undergone a significant change —"from an all-consuming, apologetic, negative, to a life-giving, optimistic, can-do positive!"

Community Health Week

WALTER D. ABBOTT, M.D., Des Moines
Member, IMS Public Relations Committee

Dr. Abbott called attention to the 1966 Community Health Week as the period from October 16 to 22. He reviewed the purpose of Community Health Week, suggesting that it would be the appropriate time for all health-oriented organizations to conduct programs emphasizing the theme "Teaming Up for Better Health."

In each of the four years during which Community Health Week has been observed, Dr. Abbott pointed out, the Iowa Medical Society has circulated a variety of press releases to daily and weekly newspapers, to radio and television, etc. This IMS material, plus that distributed by the AMA, is intended to help individual county societies make maximum use of that one week in the year to focus attention on their accomplishments and ongoing good work. Americans today, he said, are living longer, healthier lives than ever before because of enormous advances in medicine and health-care services. He urged use of Community Health Week, each year, not only to remind the public of the continuing progress in medicine, but also of the public-service orientation and the high ideals of the medical profession.

The Iowa Medical Foundation

JOHN H. SUNDERBRUCH, M.D.
Davenport

In outlining the broadening sphere of the Iowa Medical Foundation, Dr. Sunderbruch dwelt principally on one new undertaking—a Physicians' Relief Fund. He referred to the recently approved statement of the scope of the program. It says, in part: "The full extent of need will come to light only as acquaintanceships within the profession reveal personal hardships. The Foundation invites individuals aware of instances where financial hardship is being experienced to share this information with the Executive Committee. The Committee in reviewing any case brought to its attention may, when it seems appropriate, counsel with the president of the county medical society or other physicians located within close proximity of the hardship case. With this necessary information, the Foundation, through its Executive Committee, will determine if and how it can be of service. The Physicians' Relief Fund will operate on the basis of loans, rather than grants. Loans will be made on an individual basis with the circumstances of each case determining the amount of the loan, the method of making the loan, and the arrangements for repayment of the loan."

Dr. Sunderbruch indicated that the IMF Board of Directors hopes that there never will be many Iowa physicians in financial difficulties, but that the Board members are pleased to report the establishment of a program for helping any who are.

Dr. Sunderbruch mentioned that the IMF medical-student loan program had surpassed the $275,000 mark as regards the total amount on loan, and he also called attention to the Foundation's participation in the 1966 "Hall of Health" project at the Iowa State Fair.

Usual & Customary Fee Concept

KENNETH E. LISTER, M.D., Ottumwa
Member, IMS Board of Trustees

It is the opinion of many observers, Dr. Lister said, that the freedom of private medicine, threatened as it may now be, can survive only through the acceptance and preservation of two principles: first, individual responsibility, and second, usual-and-customary fees.

Though some believe the usual-and-customary provision of the Medicare Law will be short-lived, and that stringent fee schedules are only a year or two away, he reviewed actions taken at both the 1965 and 1966 meetings of the IMS House of Delegates directing the IMS to seek implementation of the usual-and-customary-fee concept to the fullest extent possible. He referred to the need for specific definitions for the words *usual* and *customary* and for other words frequently associated with them. He indicated that the officers of the IMS are working with other states to gain AMA ratification of definitions in the best interests of the medical profession.

Dr. Lister cited the several programs within Iowa which are now utilizing or are about to embody usual-and-customary provisions: the Blue Shield Federal Employees' Group Program; the Military Dependents' Medical Care Program; and the group programs of John Deere and J. I. Case,

administered by Travelers and Aetna, respectively.

He noted that 57 county medical societies have requested and have been provided data from the 1965 IMS Usual and Customary Fee Survey. He stressed the importance of an active and responsible claims-review committee within each county medical society, and he concluded by declaring that each and every doctor must cooperate fully if the concept of usual-and-customary-fees is to find acceptance and to flourish.

The U. of I. College of Medicine

ROBERT C. HARDIN, M.D., Dean

Dean Hardin undertook to stress several points. First, he said, the U. of I. College of Medicine is growing rapidly. More medical students are enrolled there than at any previous time in the history of the institution. The school's facilities must be used to best advantage, for running a medical school is expensive not only for the taxpayers but also for the students who are investing a great deal of their time and effort, as well as of owned or borrowed material wealth. "We take 122 students each fall, nowadays," he said, "and it is our aim to graduate *all* of them." The loss rate of first-year medical students at the U. of I., he reported, has gone down to three per cent. Indeed, of the 244 students who entered in one or the other of the past two years, only 10 have thus far fallen by the wayside. Supposedly, the maximum number that can be accommodated now is 488, and 485 students are currently enrolled.

The dean predicted that the College will be turning out ever-increasing numbers of physicians. He said that the faculty is being enlarged in anticipation of 1970, when the new basic-sciences building will have been completed and entering classes can be increased from 122 to 160. Thereafter—though of course not immediately thereafter—it is hoped that it will be possible to graduate 150 per year.

Every medical school, he said, is reexamining its curriculum, for there are just too many skills and too much medical information for a faculty to teach to any single person in an average lifetime. The faculty at the U. of I. College of Medicine has come up with a set of principles that it expects to implement during the next few years. One of those principles is that as much as possible of basic medical knowledge must be squeezed into the first three years of medical school. For the senior year, the students are to be "untracked," so that they may go into any of several different programs, one of which will be family practice.

Dr. Hardin reported on the overall plan for developing the U. of I. medical campus. It will include the new basic-sciences building, a new medical library and commons, a new dental school and a new college of nursing. Oakdale, he reminded his audience, has come into the sphere of the College of Medicine, and a center is being developed there for toxicologic research by the Department of Pharmacology. He envisioned Oakdale as an "interbase" between the medical school and the community, for there he and his associates hope to locate programs relating especially to community health.

Dr. Hardin announced that the College of Medicine expects to ask the 1967 General Assembly for funds to add an ambulatory-patient wing to University Hospitals, for the numbers of patients who need minimal nursing services is definitely on the increase.

In conclusion, he expressed the hope that the College of Medicine would continue to have the support of the Iowa Medical Society, and he emphasized that cooperation—indeed a partnership—between private practitioners and the faculty of the College serves the interests of all Iowans.

The State Department of Health

ARTHUR P. LONG, M.D., Commissioner

Dr. Long reminded his hearers that at the 1965 meeting of the IMS House of Delegates he had expressed the hope that the State Department of Health, the Iowa Medical Society and the U. of I. College of Medicine might be made a triad of public-health-oriented organizations, and he expressed satisfaction that such a triad is on its way toward realization.

Last February, he said, his Department distributed a bulletin to inform physicians about its structure and workings. A slightly revised edition of that bulletin is now available, and he urged doctors to request copies of it.

The principal thrust of the State Department of Health, Dr. Long declared, is toward the development of adequate local health services. That idea is not a new one, he acknowledged; on the contrary, it is one that knowledgeable people have had, at least in the backs of their minds, for a long time. In an effort, finally, to implement it, he and his associates are getting out into the state and are attempting to inform people about the public-health services which they should establish at the local or near-local level. He took satisfaction in reporting that about 96 volunteer community-health workers in about 63 counties are cooperating with the state extension service in delivering basic information about local health services. They are answering such frequently-asked questions as: "What is a local health service?" "What is a sanitarian?" and "What does a public-health nurse do?" Dr. Long said that regional meetings for community leaders are being planned in various places throughout the state, to which all physicians will be invited.

The public-health statute now included in the

Code of Iowa, Dr. Long declared, has reached the venerable age of 100 years, and it is precisely as much out-of-date as one might expect such a law to be. To take its place, the 1967 General Assembly of Iowa will be asked to adopt a law having about four salient features: (1) A majority on each local health board must consist of professionals. (2) Funding from the state to the local community shall be based on population and need. (3) Local boards shall be empowered to make rules and regulations, employ personnel and set up programs to fit local needs. (4) Arrangements for the establishment of district public-health departments shall be provided, since separate departments in all of Iowa's 99 counties would be impossible of attainment.

Dr. Long reviewed his Department's certification of Medicare facilities. Of the 60 hospitals that had applied, 144 had been certified at the time of the Fall Conference. Of 20 home-health agencies that had applied, 15 had been certified. All of the 14 x-ray laboratories that had applied had been certified. And of the 18 clinical laboratories that had applied, 16 had been certified.

He said that extended-care facilities were receiving attention at the time of his report, and he emphasized the importance of such institutions as "safety valves" for the state's general hospitals. The refresher course for nurses who wish to return to practice, he said, was operating satisfactorily. To date, 10 courses had been offered, providing instruction for about 200 nurses, and about 20 more courses were being planned in an effort to return about 600 nurses to practice.

Dr. Long told of a course to be offered later in the fall on the control of infection in hospitals, under the joint sponsorship of the State Health Department, the Iowa Medical Society and several other organizations. He said that course would be just the first of a series of one-day programs at various centers in Iowa, dealing with the control of infections. Another course of which he said the State Department of Health would be one of the sponsors this fall, would deal with emergency care of the sick and injured.

Legislative proposals of the State Health Department next January, in addition to the updating of the law authorizing local public-health services, will include a measure governing the care and use of radiation sources, and one designed to set limits on air pollution.

Dr. Long referred to the impending retirement of Dr. Ralph H. Heeren, the long-time deputy commissioner of health for the State of Iowa, and the acting commissioner for a short time a couple of years ago. He praised Dr. Heeren's work, before announcing that another highly qualified physician, Dr. A. M. Reeve, had been hired to succeed him.

The Community-Action Program for Children in Southwest Iowa

JOHN C. MACQUEEN, M.D.
Professor of Pediatrics
U. of I. College of Medicine

Recently, the case-finding program undertaken in four counties of southern Iowa under the aegis of the Office of Economic Opportunity has been abandoned, principally because adequate numbers and kinds of staff members could not be hired for it. Thus, the project which Dr. MacQueen discussed must now be regarded as no more than a brave attempt.

Dr. MacQueen said that it never had anything to do with the State Services for Crippled Children, other than that he was involved in both of them. Some citizens from the four-county area had come to him to propose that he conduct a survey of the health-care deficiencies in their part of the state. He noted that his evaluation of the available facilities and personnel there included a conference with the physicians in private practice throughout the area. The community-action unit, as he envisioned it, was to include nurses, clinical psychologists, dental hygienists, etc., and its principal activities would be directed toward the improvement of school health programs and of children's nutrition in their homes. Acute medical problems, he declared, were to remain the responsibility of physicians in private practice. He emphasized that the project was intended as a demonstration only, and that it was to be under the surveillance of a local committee. Problems, as they were identified, were to be referred promptly to local physicians.

Under the Statehouse Dome

ROBERT B. THROCKMORTON, L.L.M.
IMS Legal Counsel

Mr. Throckmorton said that the present Iowa medical-practice act is generally quite satisfactory to the medical profession. Over a period of years, the General Assembly has seen fit to give physicians unlimited rights to practice, and indeed has made improvements in the laws, so that Iowa has what he regards as one of the best sets of statutes, of that sort, in existence. Iowa has a composite Board of Medical Examiners for both M.D.'s and osteopaths; foreign-trained physicians have been provided for; and provisions have been made for interstate reciprocity of licensure, and for licensure by endorsement. The State Board of Health now consists of nine members, and it has policy powers, rather than the merely advisory functions that it formerly exercised. There are an appropriate number of physicians on the Board, even though no

such requirement was spelled out in the legislation. The medical-examiner system replaced the outmoded coroner system several years ago. The medical profession has adequate representation on the Iowa Hospital Advisory Council, which disburses Hill-Burton funds.

Mr. Throckmorton dwelt briefly on the relationships between the IMS and other organizations in the health field. He said that relationships with the osteopaths are generally good. Agreements on matters of mutual concern are usually arrived at through the M.D./D.O. Liaison Committee. Likewise, relations between the IMS and the pharmacists and the dentists are generally good. He mentioned some potential difficulties with respect to chiropractors, podiatrists, clinical psychologists, etc., however.

He mentioned several important non-legislative activities in which the IMS is involved, and he used the newly-organized Health Planning Council of Iowa as an example of the technics by which the medical and allied professions, through voluntary action, can ward off compulsory legislation. Another example consists of the work that the IMS Committee on Automotive Safety has done in arranging for individual medical consideration for persons with diseases or other handicaps that may or may not disqualify them for driver licensure. That Committee's work probably will obviate additional legislation in the field of driver's-license examinations.

With respect to new legislation, Mr. Throckmorton expressed some concern regarding the press coverage that had been given to a proposal that a single licensing unit be substituted for the separate ones now in existence. It had seemed to him the newspapers were intent on conveying the impression that the Commissioner of Health and his associates believed the separate licensure boards were being misused by some of the professional groups to feather their own nests, rather than to protect the public's interests. That sort of story, he declared, quite unwarrantedly reduces public confidence in the medical profession, and makes people think it should be deprived of some of the freedom it has been given.

In conclusion, Mr. Throckmorton emphasized the importance to the IMS of member physicians' making the most of every opportunity to talk with or write to their respective legislators, during the coming fall and winter, with regard to issues in which the medical profession is concerned. He made a point of the fact that matters of this sort, at the state level, are seldom strongly partisan ones. Rather, they are questions of public policy about which the legislators are actually eager to get opinions from the physicians whom they know best. He also commented briefly on the type of enabling legislation which it might be best for Iowa to adopt, in preparation for Title 19 of P.L. 89-97. Though the State Board of Social Welfare must have some flexibility in administering programs under that Law, he thinks it should not be given a "blank check." Instead, he advocates the type of legislation enacted in Iowa for Medical Aid to the Aging.

Federal Legislation in the Health Field

Mr. HARRY PETERSON
AMA Legislative Department

The 89th Congress established some records, Mr. Peterson reported. Over 25,000 bills were introduced during its sessions, in contrast to the two previous sessions at which some 5,000 fewer measures had been proposed. The 89th also established itself as the most health-oriented in history by approving 1,500 proposals related to medical care, to the practice of medicine or to public health. That was twice the number adopted by the previous Congress.

Mr. Peterson reviewed the Medicare Law; the legislation authorizing Regional Centers for Heart Disease, Cancer and Stroke; the Appalachian Regional Development Act, which among other things provides for health demonstration facilities; the Drug-Abuse Control Amendments; the law authorizing grants for the construction of facilities for mental retardates and for community mental health centers; the Health Professions Educational Assistance Amendments; the Medical Library Assistance Act; and the Vocational Rehabilitation Amendments.

The pace at which health proposals were adopted was slowed considerably during the second session of the 89th Congress, Mr. Peterson reported, and a number of far-reaching schemes were not enacted. There seemed little doubt that they would be reintroduced early in 1967, however. He called particular attention to the Allied Health Profession Personnel Training Act, as it is called, though it isn't yet a law. Under its provisions, federal grants would be authorized for bricks and mortar and for operational expenses of medical and paramedical schools, and for student loans and scholarships. Among other things, 100 per cent forgiveness of loan-repayment would be granted to certain medical students.

Two bills proposed an expansion of the role of U.S.P.H.S., and a pooling of what are now separate federal grants for the control of venereal diseases, tuberculosis and cancer. The argument in support of the latter of these has been that a single grant for all three would permit states to make better use of the money. One might be willing to accept that contention if it were not for the fact that the bill by which grants for venereal disease, tuberculosis and cancer control would be pooled, actually contains provisions for new grants for campaigns against other specific diseases!—indeed for fighting them in specified districts or regions! Pres-

ent federal grants to states for the control of venereal diseases, tuberculosis and cancer, Mr. Peterson said, total about $110,000,000, and the proposed changes would run the bill up to about $500,000,000 per year.

Concluding his remarks, Mr. Peterson said that the trend is clear. We can expect ever-increasing federal involvements in every phase of medicine and covering ever-larger segments of the population.

Political Action and the Physician

OTIS D. WOLFE, M.D., Marshalltown

Chairman, Iowa Medical Political Action Committee

Dr. Wolfe spoke of the diatribes that have been directed at physicians and at the medical profession, even since the passage of Medicare. They have included accusations that the AMA is a tightly-run trade union; that it controls medical schools for the purpose of holding down the numbers of physicians; and that it opposes every progressive public-health proposal, and spends most of its money on political campaigns. To underscore the dimensions of medicine's image problem, he cited some examples of those attacks. But the downright disheartening aspect of the situation, he said, is that many physicians seem ready to believe the charges made against their own profession. If, when the AMA is attacked, those doctors shrink from identifying themselves with it, they do so because they haven't participated sufficiently in the activities of organized medicine to know that the charges made against the AMA are untrue.

Let's not forget, he cautioned, that one of the objectives of medicine's adversaries is to divide physicians into splinter groups. It is absolutely essential for doctors to resist. As Medicare is now administered, he acknowledged, it looks innocuous, but it can get the medical profession into trouble. President Johnson has already told the old folks that Medicare is just a start. He has told HEW Secretary Gardner to take a hard look at medical costs. Dr. Wolfe invited his hearers to guess at who will be blamed for the high costs of Medicare, and at what measures will be proposed for slowing their rise.

The answer, Dr. Wolfe pointed out, will consist of exerting maximal influence on the decisions that the American people make at the polls.

Implementation of Title 19

ERNEST B. HOWARD, M.D., Chicago

AMA Assistant Executive Vice-President

Under Title 18 of the Social Security Act—the Medicare Law—about 20,000,000 people's health care has become the responsibility of the federal government, but Title 19, Dr. Howard pointed out, is to be an even more comprehensive measure—one that won't reach its full scope until 1975.

In that it authorizes health care at federal-state expense based on need, Title 19 reflects a philosophy that the medical profession supported during the final months of its unsuccessful campaign against Medicare, he reminded his audience. Yet it can be made the vehicle for the total socialization of medicine. Whether it is used for that purpose depends to a considerable extent on physicians and their state and county medical societies, and on their effectiveness in influencing Title 19 implementations at the state level.

He acknowledged that the Ways and Means Committee of the U. S. House of Representatives was moving in the right direction by attempting to frame more restrictive eligibility requirements for the Title 19 program, but declared that its action was tardy. [As it turned out, the 89th Congress adjourned without enacting any such restrictions on eligibility, and consequently it is especially important for state legislatures to frame enabling statutes with great care.]

Dr. Howard said he feels that health care has been established as a right for a significant portion of the American people. If so, the task facing organized medicine, he believes, is to guard against a lowering of quality while the quantity of health care is increased. He is of the opinion that the AMA pursued the only intelligent and responsible course last year, when it sent a special committee of physicians to sit down with Secretary Gardner and negotiate the best possible administrative regulations for the Medicare Law. In the immediate future, he thinks the AMA's job will be to insist, as forcefully as it can, upon adequate training for all types of health-care personnel. In addition to physicians, nurses and the many kinds of paramedical workers with which all of us are familiar, he thinks that there soon will be some new types. He suggested, for example, that some people will be given two years of training and then will be assigned screening tasks in peripheral facilities. In general, he said, most well-informed people foresee a system in which each medical school will constitute the core for a regional apparatus. Patients with relatively simple ailments will be cared for at peripheral institutions, but those with illnesses more difficult to manage will be moved to the school's affiliated teaching hospital.

He acknowledged that some features of that plan are good, but he was unwilling to endorse them *in toto*, and regardless of whether or not it is adopted, the AMA has created a new Committee on Manpower to see to it that medical schools increase their production of physicians.

Dr. Howard touched upon many other issues with which organized medicine must deal:

- *Generic v. brand-name prescribing.* He said HEW is likely to start providing drugs under Medicare, and forecast an effort to make physicians

prescribe from a national formulary and to use generic names.

- *Closed-panel practice.* He reported that the quality of care provided by such groups as Permanente has been satisfactory, but he felt sure that strong opposition would develop if the government attempted to make closed-panel, prepayment arrangements the predominant system of medicine.
- *Vendor payment v. direct billing.* He designated direct billing as the single most important feature of Title 18, and he declared that when a physician becomes a vendor or accepts assignments, he commits himself to all kinds of government regulation and control. He lamented the fact that Title 19 contains no provision for direct billing.
- *A majority of Americans will remain uncovered by Titles 18 and 19.* Even though 20,000,000 people will be covered by Title 18, and 40,000,000 by Title 19, there still will be 150,000,000 Americans in and after 1975 who will be purchasing medical care in a competitive, free-enterprise market.
- *Physicians must do their utmost to achieve good public relations for medicine.* If doctors are to exert a constructive influence, they must gain and hold public support.

L. J. O'BRIEN, M.D., Fort Dodge

IMS Representative on the Iowa Title 19 Task Force

In his remarks, Dr. L. J. O'Brien sought a single objective—to stimulate doctors to participate in the implementation of Title 19 of the Social Security Act. The Title 19 Task Force established by the State Board of Social Welfare, and ultimately the 1967 General Assembly, he said, must be influenced by individual physicians.

Each doctor, and the Iowa Medical Society as the organization representing all Iowa doctors, he declared, must (1) insist upon freedom of choice of medical facility and of physician; (2) see to it that *medical indigency* is defined as the inability to pay for needed medical and related services without severely curtailing the ability to pay for other necessities of life; (3) insist upon independence for the fiscal intermediary; (4) hold firmly to the concept of usual, customary and reasonable fees; and (5) urge appropriate representation for practicing physicians on the medical advisory committees formed in connection with Title 19.

A relatively brief and general enabling act might be desirable from the administrator's point of view, but Dr. O'Brien warned that personnel and attitudes are subject to change, and consequently the state enabling legislation must be specific enough so that principles such as those he had listed need not be reestablished periodically.

In conclusion, he said it is important for doctors, through the IMS, to agree upon a relatively flexible position, so that their organization can act on their behalf in preserving high standards of patient care and satisfactory doctor-patient relationships under the new program.

ELMER M. SMITH, M.D.

Director of Medical Services
Iowa State Department of Social Welfare

In reporting on plans for Title 19 implementation from his vantage-point, Dr. Smith also emphasized that freedom of choice for the beneficiary and physician participation in the management of the medical aspects of welfare programs are two principles that should not be compromised.

He said that whereas more than 40 per cent of the population would be covered by an implementation such as New York's, the plan currently under consideration in Iowa would encompass less than four per cent. He listed five groups which must be brought under the Title 19 program, but emphasized that all five don't need to be covered until 1975. They are: (1) recipients of OAA, AB, AD and ADC grants; (2) the categorically related medically indigent; (3) medically indigent children; (4) over-65 inmates of mental institutions; and (5) all medically-indigent persons between 21 and 65 years of age. It is contemplated, he said, that groups 1 and 2 would be included from the outset. Such an action would make approximately 100,000 persons eligible for federal-state help in paying health-care bills, as compared with 80,000 at present.

In forecasting the scope of services to be provided in Iowa under Title 19, Dr. Smith said that a "comprehensive program" must be achieved by 1975, so as to comply with the requirements of the new law, but that the word *comprehensive* hasn't yet been defined. In order to implement the program at all, five basic types of care must be provided: (1) physicians' services; (2) inpatient services; (3) outpatient services; (4) nursing-home care; and (5) laboratory and x-ray services. He added that it is almost mandatory to supply drugs, for medical care can't be expected to do patients much good if essential medicines are unavailable.

Regarding financing mechanisms, Dr. Smith said that 59.06 per cent of the costs will be borne by the federal government, and 40.94 per cent by the State of Iowa. He also made a point of the fact that a state will not be permitted to spend less than it did in previous years. Based on the appropriations voted by the 1965 General Assembly, this year Iowa would be spending between $30 and $32 million, from both federal and state sources, if the Title-19 program and the new matching formula were in effect, whereas under present programs and matching formulas it is spending $22 million of state-and-federal funds.

In closing, Dr. Smith said that he personally favors the use of a private carrier as fiscal intermediary, and opposes any consideration of a dual-fee system.

A Regional Medical Program for Iowa

ROBERT C. HARDIN, M.D., Dean

University of Iowa College of Medicine

Dr. Frank G. Ober, of Burlington, the IMS representative on the Iowa Regional Advisory Group, introduced Dean Hardin to discuss the steps that had thus far been taken in Iowa to implement the DeBakey Amendments. Dr. Hardin said that his short experience with the Heart Disease, Cancer and Stroke Program had been interesting, though somewhat frustrating. From the outset, he reported, the U. of I. College of Medicine had been under pressure to submit an application for a planning grant. Tentative guidelines were issued in March, and the College presented an application in May to the National Institutes of Health. In July, the final federal guidelines became available, and because the U. of I. application complied with the first set of guidelines but not with the second set, a new application had to be submitted.

Dr. Hardin emphasized that if and when federal funds become available and a survey is undertaken to determine the adequacy of health care in Iowa, the IMS and other organizations will be asked to assist.

He offered it as his personal opinion that the Heart Disease, Cancer and Stroke Program isn't sufficiently comprehensive to suit the federal planners, and that it is likely to be scrapped in favor of a scheme such as that proposed in S.3008 (89th Congress).

The Potency of Professionalism

HUGH W. BRENNEMAN, Executive Director

Michigan Association of the Professions

Mr. Brenneman challenged his listeners to consider the influence that a horizontal organization of the professions could wield in Iowa.

He declared that each profession has the following attributes in common with all of the others:

- *It accepts as its main purpose the making of a contribution to human welfare.*
- *It seeks the truth, and eschews the false.* It bases its applications upon scientific facts, and changes applications as necessary upon discovery of new scientific findings.
- *It limits its services and its claims to credit to its own area of competence.*
- *It acknowledges its responsibility to make its services available to all of the public.*
- *It maintains a progressive code of ethics to protect those it serves and, secondarily, to assure maximum freedom for cooperation among its members.* It provides for a free exchange of knowledge within its ranks, without reserve.
- *It establishes standards of excellence for those who seek entrance to the profession, and for those who wish to continue as members of it.* These standards are based on character, knowledge and achievement, and have no reference to race, color or creed.
- *It carries out the responsibility of interpreting its standards and its actions to the public, and expresses its social conscience by cooperating with other ethical professions, groups and persons.*
- *By tradition, in the United States, it offers its members the right to render services to whom they please, at places and times which they choose, and at prices they wish to charge,* provided only that all of these are consistent with the ethics of the profession, the law of the land and the public interest generally.

Mr. Brenneman indicated that many freedoms stem from the attributes which he had listed. Privileged communication, the right to select patients or clients, and the right to establish professional standards are three examples which he cited. He pointed out that the union man gets his strength from his group's power to strike, and that the professional man gets his strength from his unique ability to serve. He admonished his hearers that professional people cannot take their privileges for granted. There must be ongoing, dynamic developments within venerable professions and in new professions. He reasoned that professionalism or professional ethics tend to become less important as private practitioners become smaller and smaller segments of professional groups.

He declared that popular government is doomed unless it calls to its aid the men and women who hold keys to its problems. In other words, he said, authority without knowledge is powerless, and without the support and advice of the learned professions, its deterioration is rapid. Using a numerical projection, letting each professional person represent 10 people in addition to himself, Mr. Brenneman suggested that there are 26,000,000 people in this country who can be relied upon to support points of view that have been agreed upon by professional people.

So as to facilitate agreements among professional people, he proposed the formation of an Association of the Professions in Iowa, similar to the ones that already exist in Michigan and other states. He said that such an organization in our state would do much to advance the ideals of professionalism, and he added that interchanges of opinion would engender much improved understanding among the several professions. Some areas for activity of such an organization would be legislation, education, public relations and purchasing.

THE DOCTOR'S BUSINESS

Partnership Retirement

HOWARD D. BAKER
Waterloo

Retirement is a subject of increasing interest in medical partnerships today, and with the advent of professional corporations and associations, and of self-employed retirement plans, it is one upon which a great deal of writing is being done. Unfortunately, a great deal of this writing is superficial in nature, and fails to explore all of the ramifications of such planning.

Basically, our philosophy on partnership retirement is brief and simple. Without a separate and specific investment plan to fund it, no retirement program is economically sound. We do not think that retirement of a partner should ever be funded out of the current and future incomes of the partners remaining active. In addition to the retiring doctor's equity in the partnership's physical assets and accounts, any payments to him as retirement income should be funded by some investment program and based upon that doctor's specific equity in or contributions to the fund.

In our opinion, any attempt to support retirement out of the future earnings of remaining partners ranges from the financially dangerous to the impossible. Under ideal circumstances of constantly rising incomes, such a plan might be supportable, but it would still be illogical. If income is increasing, the increase is coming from the intensified efforts and heavier work-loads of the remaining doctors. To pay out a portion or all of this increase to a retired member would certainly be an injustice to the producing doctors. Like our Social Security System, under proper circumstances, such a plan might be *supportable* on sheer volume of dollars, but it would be completely *illogical* on economic and moral grounds.

In the past, writers have advocated such plans under captions such as "Let Your Partners Pay for Your Retirement," and so forth. These articles have advocated precisely the socialistic philosophy that the title implied, and have dwelt exclusively on the *possibility* of such a plan, ignoring completely any *justification* for such a plan.

The plans advocated in such articles have reflected many erroneous assumptions. Two most flagrant are (1) that the number of partners would increase constantly, and (2) that the per-doctor income can be relied upon to continue rising constantly. If we concede these two premises, we grant that it is possible for the plan to function. However, should the profits decline and/or the number of partners decrease, a financial impossibility could result. Another unsound premise involved has been the necessary forfeiture of capital and accounts by a doctor who leaves voluntarily for reasons other than death or retirement.

In summary, such a plan's success would be dependent solely upon completely favorable financial circumstances. Adverse practice and/or economic conditions could render it wholly unsupportable, except to the ruinous detriment of the remaining partners.

In considering the feasibility of such proposals, one must place himself successively in the positions of the retiring partner and the remaining partners, and must consider all adverse possibilities. If the plan can survive such a test, it may warrant further consideration.

If we agree on the basic premise that a plan must be founded on an investment program and on the retiring doctor's prior contribution to the program, the remaining question concerns whether such a plan should be an individual or a collective responsibility.

In our opinion, unless some specific financial or tax advantage presents itself, each partner should provide for his own retirement through his individual investment plan. The major problem of a partnership plan is agreeing upon a common medium for investment and on the amount to be contributed each year for this purpose. The senior doctors might lean toward an annuity plan, with heavy annual commitments, for the purchase of bonds or certificates of deposit, whereas younger doctors with already heavy financial burdens might favor

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

a stock or fund purchase plan with lower contributions.

If a tax benefit can be realized, certainly a compromise should be reached, but we should all agree on the imprudence of compromising a financial plan if no such advantage exists. In the absence of this tax advantage, certainly each doctor should pursue his own financial goal.

What are the potential tax benefits available? The Self-Employed Retirement Plan presently offers only a minimum tax advantage. If and as the law regarding these plans becomes more favorable, their attractiveness will increase. However, under present law, these plans offer only a small advantage to those in the right financial situation.

On the premise that the primary goals for a partnership are improved medicine and ease of practice, there seems to be little justification for the partnership to assume an ever-increasing responsibility for the individual partner's personal financial planning. We feel that this position is logical unless or until there is an appreciable financial or tax benefit to be gained through a collective approach to financial planning.

U. of I. Postgraduate Short Course

(Continued from page 1200)

9:40 a.m. "Bead-Chain Cystogram, a Diagnostic Aid or a Delusion"
Stanley W. Greenwald, M.D., Iowa City
10:00 a.m. "Submucous Fibromyomas"
C. Rodney Stoltz, M.D., Watertown, South Dakota
10:40 a.m. "Prenatal Estimation of Fetal Maturity"
Roy M. Pitkin, M.D., assistant professor, University of Illinois, Chicago
11:00 a.m. "Spastic Ureter as a Cause of Pelvic Pain"
Warren W. Tucker, M.D., Denver
11:20 a.m. "Electrical Stimulation of Labor—Preliminary Report"
William G. Slate, M.B., Ch.B., professor and chairman of obstetrics and gynecology, Loma Linda University, Loma Linda, California
11:50 a.m. "Cytologic Screening in Private Practice"
Otto F. Kraushaar, M.D., Salem, Oregon
12:30 p.m. LUNCH
2:00 p.m. "Diagnosis and Management of Cervical Dysplasia"
Dr. Slate
2:30 p.m. "When Is Conization Indicated?"—Discussion and Motion Picture
Frederick P. Zuspan, M.D., chairman, Department of Obstetrics and Gynecology, University of Chicago
3:15 p.m. DISCUSSION
3:45 p.m. "Endometriosis—Place of Hormonal Therapy"
James A. Merrill, M.D., head of obstetrics and gynecology, University of Oklahoma, Oklahoma City
4:15 p.m. "Management of the Menopausal Syndrome"
Robert B. Wilson, M.D., chief of obstetrics and gynecology, Mayo Clinic, Rochester, Minnesota
4:45 p.m. DISCUSSION
7:00 p.m. SOCIAL HOUR AND DINNER—University Athletic Club

Wednesday, January 18

SYMPOSIUM—PREGNANCY COMPLICATIONS

9:00 a.m. "Use of Amniocentesis in Fetal Evaluation and Treatment"
Dr. Merrill
9:30 a.m. "Hypofibrinogenemia—A Potentially Lethal Disease"
Dr. Zuspan
10:00 a.m. DISCUSSION
10:30 a.m. "Obstetric Management of the Diabetic"
Dr. Wilson
11:00 a.m. "How Safe Is Induced Labor?"
William C. Keettel, M.D.
11:30 a.m. "Urinary Estroil Excretion as an Index of Placental Function"
James T. Bradbury, Sc.D.
12:00 m. DISCUSSION
12:15 p.m. LUNCH
1:30 p.m. "Pathology of the Placenta"
Dr. Merrill
2:00 p.m. "Diagnosis of Trophoblastic Disease"
Dr. Wilson
2:30 p.m. "Plasma Progesterone Levels in Pregnancy"
Michael E. Yannone, M.D.
3:00 p.m. DISCUSSION
3:30 p.m. "Effects of Medicare and Title XIX on Clinical Material in California"
Dr. Slate
4:00 p.m. "Family Spacing—A Social Obligation"
Dr. Zuspan
4:30 p.m. DISCUSSION

Registration: The registration fee for the conference is $25.00. Tickets for lunch are included.

Dinner: The Iowa Obstetrical and Gynecological Society will sponsor the Tuesday night social hour and dinner at the University Athletic Club. Tickets for registrants and their wives may be purchased at the registration desk.

Credit: This program is accredited for 12 hours by the American Academy of General Practice.

Parking: Registrants for this course are asked to park along Newton Road. Campus Security Police will be available to assist you. Parking permits are necessary and are available upon request.

The Month in Washington

(Continued from page 1196)

ber of major areas including: basic research, clinical research, education and prevention, consultation and training, and support of local programs.

"It will encourage and support alcohol research in universities and research centers, and it will also conduct studies in its own laboratories," Gardner said. "It will not provide treatment for alcoholics, but will concentrate on the support of research, training, and control programs.

"We realize that a program of this kind cannot stand alone. It needs widespread public understanding and support. We will work with organizations and institutions already making great contributions to the prevention and control of alcoholism. Our objective, in brief, is to mobilize public and professional efforts on the scale necessary to overcome the blight of alcoholism."

Iowa Chapter of the American Academy of General Practice

18th Annual AAGP Scientific Assembly

Members attending the Academy's Scientific Assembly in Boston were in agreement that it was one of the outstanding scientific meetings, but the total registration was disappointing. This was the first fall program for the AAGP, all other annual meetings having been held in the spring. Perhaps the new timing was one of the reasons for the small attendance, and then again, the fact that Columbus Day was a legal holiday may have been a reason. A total of 2,126 physicians registered, 33 of them being from Iowa.

Dr. Carroll L. Witten, of Louisville, Kentucky, was installed as the 19th president of the American Academy. Dr. George E. Burket, Jr. of Kingman, Kansas, was named president-elect; Dr. Maynard Shapiro, of Chicago, Illinois, was chosen as vice president, and the three new members of the Board of Directors are Drs. Roger N. Chisholm, Denver; Lloyd G. Davies, Fryeburg, Maine; and William E. Lotterhos, of Jackson, Mississippi.

The 19th Annual Scientific Session will be held in Dallas, Texas, September 16 through 21, 1967. The convention site will be Market Hall, located on the new 16-lane Stemmons Freeway. It is hoped the physician attendance there will surpass Boston's attendance, and also the 1965 meeting in San Francisco, which attracted 2,886 physicians. Dr. Vern L. Schlaser, of Des Moines, will be chairman of the Subcommittee on Scientific Exhibits for the Dallas meeting.

Some dates for Iowa Academy members to remember are: The Refresher Course for the General Practitioner, University Hospitals, Iowa City, February 14 through 17; Spring Postgraduate Conference, New Inn, Okoboji, June 15 through 17; 19th Annual Meeting and Scientific Assembly of the Iowa Chapter, Hotel Savery, Des Moines, October 26 and 27.

Winter Driving Tips

1. Avoid sudden acts in braking, accelerating or steering to avoid skidding.
2. Slow down—winter driving conditions require greater caution.
3. Maintain even speed, especially on snow or icy roads.
4. Allow greater distance when following a car.
5. Pump brakes when slowing or stopping on snow or ice.
6. Use lower gear descending icy hill.
7. Keep gas tank as full as possible to avoid gas tank condensation. Traffic tie-ups also consume gas.
8. Conserve battery by decreased use of electrical accessories.
9. Guard against monoxide poisoning—leave one window partially open.

Promise, Inc.

Considerable numbers of doctors in central Iowa, at least, are aware of the medical mission that Dr. Pak-Chue Chan (who at one time was on the staff of the ISU Student Health Service) has been conducting for refugees from Red China, just outside the City of Hong Kong, in the British Crown Colony. Many Iowa doctors, indeed have made contributions to help with his work.

As is invariably true of such projects, Dr. Chan's mission is still in need of funds and of specific apparatus. A letter from Mr. R. C. Bentley, executive director of Promise, Inc., the sponsoring organization (P. O. Box 1221, ISU Station, Ames 50012) to Dr. Ralph L. Gorrell, of Clarion, dated October 21, 1966, said, in part: "The building is progressing very well. They hope to have it ready for occupancy by March. In addition to the $15,000 needed by March, the equipment needed for the new clinic includes a 200 m.a. x-ray machine, microscopes, a centrifuge, a hemocytometer, pipettes, test tubes and racks, glass slides and cover slides. We already have a microscope ready for shipment, but others are needed.

"Dr. Chan also sent a list of items needed for the school children and for the Sunday services. They will need about 350 to 400 chairs and desks or tables for the school, and they will need 400-500 chairs for the church services. There is also a need for furniture for two bedrooms, a dining room and a kitchen. There are also the two maternity rooms on the second floor that need furnishing."

Among the above desiderata, the x-ray is of course the major item. Both Mr. Bentley and Dr. Gail Proffitt, director of the ISU Student Health Service, have expressed the hope that some physician who is in the process of installing new and improved roentgenographic equipment may be willing to donate his old machine to Dr. Chan.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Virus Isolation

During the winter months there is usually an increase in the incidence of respiratory infections. These acute illnesses include pneumonia, bronchiolitis, croup, colds and influenza. Each disease can be caused by any of several viruses, and each virus can cause any of several diseases. Also, in a substantial proportion of any series of cases, the etiologic agent cannot be detected at all.

Good public-health practice dictates establishing the etiology of an infectious disease as promptly as possible. Although it is not feasible to attempt isolating the virus in every case of respiratory-tract infection, laboratory facilities are available for the study of selected indicator cases. Isolating the specific agent or agents from a few representative cases in a community facilitates the diagnosis of other cases by serologic means.

The State Hygienic Laboratory is interested in receiving specimens for virus isolation and serologic examination from cases of respiratory-tract infection and other diseases that are suspected of being virus-caused.

Material for virus isolation should be collected as early as possible after the onset of illness. To collect a throat washing, have the patient gargle with approximately 10 ml. of sterile broth, and expectorate into a clean cup. Also, put into the cup any sputum that he has coughed up. Have him repeat the gargling with broth once or twice, and pour the total yield into a glass container. Throat swabs may be used to collect specimens from infants for virus isolation. Such swabs must immediately be immersed in tubes containing 3 or 4 ml. of sterile broth, and agitated vigorously. After you have squeezed the swabs as dry as possible by pressing them against the sides of the tubes, you can discard them. All specimens for virus isolation should be frozen promptly after collection, and sent to the Laboratory packed in dry ice. Physicians may obtain shipping containers and additional information on the collecting of specimens for virus isolation by phoning the State Hygienic Laboratory, in Iowa City (Area Code 319-353-5990).

It is most important to collect blood specimens from patients during the acute and convalescent stages of their illnesses. These blood specimens should be sent to the Laboratory on the day of collection, and must not be frozen. Each specimen submitted must be accompanied by adequate identification and sufficient clinical information to aid the Laboratory personnel in selecting the proper technic for testing.

Finally, it should be emphasized that virus isolation is the method of choice in the laboratory diagnosis of infections caused by Coxsackie, ECHO and polio viruses. These viruses can be isolated from stool specimens, throat washings, cerebrospinal fluids and pleural fluids. After an enterovirus has been isolated from a patient, his acute and convalescent serum specimens are tested with the virus to determine the role of the virus in his illness. To depend solely on serologic diagnosis for Coxsackie and ECHO infections would be futile, for one would have to examine each pair of specimens against 34 Coxsackie or 32 ECHO viruses.

Therefore, physicians are urged to collect specimens for virus isolation, as well as blood specimens for serologic examination whenever a virus infection is suspected.

Erythematous Lesions as Clinical Manifestations of Histoplasmosis*

In 1962 an epidemic of histoplasmosis occurred in Mason City, Iowa. The source of the infection was a starling roost in the center of town, and the epidemic resulted when heavy equipment was used to remove trees and underbrush from the contaminated area. In 1964 a second attempt to clear the site led to a second epidemic of histoplasmosis in the same city.

During the second outbreak acute pulmonary histoplasmosis developed in 87 persons, and erythema multiforme or erythema nodosum in 30. The evidence is that the skin lesions were related to primary infection with *Histoplasma capsulatum*.

Mason City has a population of 30,642 and is located in the prosperous farmlands of north central Iowa.

Investigation six months after the first outbreak revealed that 28 persons had had clinical histoplasmosis, but no cases of erythema multiforme or

* Antone A. Medeiros, M.D., Sophocles D. Marty, M.D., Fred E. Tosh, M.D., and Tom D. Y. Chin, M.D., NEW ENGLAND JOURNAL OF MEDICINE, February 24, 1966.

erythema nodosum were reported. When there was additional work at the site of the starling roost two years later, an increase occurred in the number of cases of histoplamosis. Furthermore, an unusual number of cases of erythema multiforme and erythema nodosum appeared.

In a survey undertaken by the Kansas City Field Station of the Communicable Disease Center of the Public Health Service, skin and serologic tests and chest X-rays were made of school children, factory workers, and employees of downtown stores.

The patients with erythema lesions were examined and interviewed. The lesions were classified as erythema multiforme or erythema nodosum or both. Biopsies of both types of lesions in one patient demonstrated tissue reactions consistent with erythema multiforme and erythema nodosum.

APPEARANCE OF RASH

Pulmonary histoplasmosis developed in 81 persons between February 10 and March 11, 1964, and six other cases occurred later. H. capsulatum was cultured from lung biopsies of two patients. Among the 30 persons with erythema multiforme, erythema nodosum, or a combination of both rashes were 18 patients who had had clinical histoplasmosis prior to the rash; in the other 12 there had been no symptoms before the skin rash appeared.

The clinical illness that preceded the onset of rash was typical of acute pulmonary histoplasmosis. It was characterized by a sudden onset, influenza-like symptoms, and prolonged convalescence. The most frequent complaints were fever, chills, myalgia, pleuritic chest pain, headache, night sweats, excessive fatigue, and dry, hacking cough. The period from onset of clinical disease to rash ranged from two to 42 days, with a median of 10 days.

The lesions of erythema multiforme varied in configuration and size, ranging from a few millimeters to 5 cm. in diameter. Most of the lesions were purplish-red, elevated plaques, frequently having a depressed slate-blue center. The erythema-nodosum lesions consisted of subcutaneous, tender, reddish-brown, warm nodules, ranging from 0.5 cm. to 2.0 cm. in diameter.

All 29 of the 30 patients skin tested for histoplasma were positive; the one patient not tested had a positive serologic reaction. Only one patient was positive to tuberculin.

BACKGROUND OF RESIDENTS

The majority of patients were lifetime residents of Iowa, and none had lived for more than six months in an area of high endemic prevalence for histoplasmosis. All had visited the downtown shopping area during the clearing of the starling roost in February, 1964.

The 1964 epidemic in Mason City is the first outbreak of histoplasmosis associated with erythema multiforme and erythema nodosum in which a point source has been clearly established. Among the evidence that the cause of the skin lesions was H. capsulatum was that in 18 persons the onset of rash was preceded by pulmonary histoplasmosis; of 12 persons whose first complaint was the rash, 11 were skin tested and all were positive, and seven had positive complement-fixation titers or X-ray evidence of pneumonitis as an indication of recent infection.

The fact that erythema was observed only during the second outbreak might suggest that is was related to exogenous reinfection. However, the residence histories of the patients indicated the opposite. More than half the patients with skin lesions were living in non-endemic areas outside the city during the first epidemic, and the remainder resided in areas along the periphery of town, away from the contaminated site.

It is probable that the patients with erythema nodosum and multiforme were not infected during the first epidemic and were susceptible to primary infection when they went shopping in the area in February, 1964. Among 102 employees of downtown stores, 95 per cent were positive to histoplasmin in April, 1964.

Among the persons most likely to have been reinfected—those residing near the site during both outbreaks—there were no known cases of erythema.

SKIN LESIONS RARE

The question arises why skin lesions due to histoplasmosis have not been reported more often from endemic areas. An answer may be approached by calculation of a case-to-infection ratio. In a survey of 2,160 Mason City school children after the first epidemic, 29 per cent were positive to histoplasmin. A survey after the second epidemic showed that 49 per cent of 1,499 children were positive.

If adults comprise two thirds of the population of the city (20,000 persons) and 15 per cent were histoplasmin sensitive before the outbreak, then 17,000 adults were histoplasmin negative. By applying the skin-sensitive rates in school children to adults, it can be seen that 5,000 adults were infected in 1962, and 6,000 adults in 1964. Erythema multiforme and erythema nodosum occurred in 16 residents, or a ratio of about three cases per 1,000 primary infections in adults.

If, as has been estimated, 500,000 new histoplasmosis infections occur annually in the United States, of which approximately 50,000 may be in adults, then approximately 150 cases of erythema lesions due to histoplasmosis occur in adults in the United States annually. Thus, it is not surprising that the association between histoplasmosis and skin lesions is frequently overlooked.

Morbidity Report For Month of October, 1966

Diseases	1966 Oct.	1966 Sept.	1965 Oct.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	531	197	275	Jefferson, Johnson, Muscatine, Scott
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	39	7	43	Appanoose, Pottawattamie
Whooping cough	8	6	0	Clayton, Scott
Brucellosis	5	4	4	Dubuque
Chickenpox	173	32	144	Adair, Clay, Polk, Scott
Meningococcal meningitis	0	0	4	
Mumps	58	37	64	Des Moines, Polk, Scott
Poliomyelitis	0	0	1	
Infectious hepatitis	37	59	23	Black Hawk, Buchanan, Des Moines, Dubuque
Rabies in animals	6	11	17	Benton, Buena Vista, Clay, Guthrie, Marshall, Palo Alto
Malaria	2	2	0	Jasper, Muscatine
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	30	24	27	For the state
Syphilis	118	93	87	For the state
Gonorrhea	329	214	254	For the state
Histoplasmosis	4	1	2	Calhoun, Johnson, Linn, Monona
Food intoxication	0	0	0	
Meningitis (type unspec.)	1	0	2	Jasper
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	0	7	Jefferson, Polk
Salmonellosis	7	10	7	Dubuque
Tetanus	1	0	0	Dubuque
Chancroid	0	0	0	
Encephalitis (type unspec.)	1	0	3	Kossuth
H. influenzal meningitis	1	0	1	Scott
Amebiasis	0	0	3	
Shigellosis	6	2	7	Polk
Influenza	0	0	0	

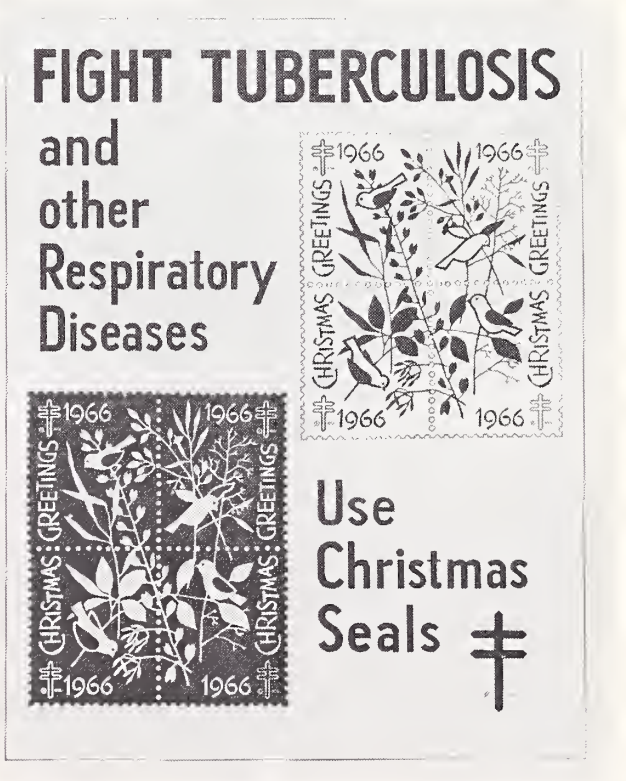
National Congress on Socioeconomics of Health Care

The effective organization and delivery of health services will be explored at the First National Congress on the Socio-Economics of Health Care, on January 22-23, 1967, in Chicago.

The Congress, sponsored by the Council on Medical Service and the Division of Socio-Economic Activities of the American Medical Association, will be held at the Palmer House, and will bring together authorities from medicine, health care administration, social science, education, community planning, and other disciplines to report on new issues, developments and techniques in the organization, delivery and financing of health care services. George W. Slagle, M.D., of Battle Creek, Michigan, chairman of the Council, said the meeting will serve as a national forum for interchange of information and opinion among the many areas of society concerned with this subject.

Through a series of presentations and discussion sessions, conference participants will explore the current health status of the population, the impact of medical and social changes on patterns of health care, the changing role of the hospital and its medical staff in the community, new methods in training and utilization of health manpower, and financing of health services.

Additional information, including registration details, may be obtained from the Division of Socio-Economic Activities, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.



Iowa Association of Medical Assistants

The Emergency

Webster's dictionary defines an emergency as a situation requiring immediate action. We might elaborate on that definition by saying that it is a situation requiring immediate, *intelligent* action. Certainly, moreover, it is one of the things for which a medical assistant must always be prepared.

In real life, an emergency doesn't always closely resemble the ones we have seen on TV or heard on radio, for key people may "freeze," rather than react just as they should. All of the "book learning" and all of the practice one has had may escape her memory, and she will be left helpless unless a few simple rules have been impressed indelibly on her mind.

"PHONE" EMERGENCIES

If you are notified of a emergency by phone, find out:

Who is calling. Be sure to get the name of the caller and the name or names of the injured. If you do not recognize the name, ask the caller to spell it. The asking and answering will take time, but accuracy is vital.

What happened. Ask the caller to give you no more than the basic information that you will need in order to assemble the necessary personnel and equipment promptly.

Where the emergency has occurred. Ask the caller for the address, or for instructions about how to get there, and if he or she is too excited to give the address or the directions intelligibly, ask for the number on the dial of the phone that he or she is using. With that information, you can enlist the help of the telephone operator in finding where the call has come from.

Then, as a medical assistant, you must channel the information properly in order to aid the injured as quickly as possible. Whom should you call? Your physician employer should be first if he is available. If not, an alternate whom he has designated is on call. From the information you received, you should be able to tell where the victim can best be treated. UNDER NO CIRCUMSTANCES may the medical assistant undertake to diagnose or prescribe!

OFFICE EMERGENCIES

The acutely ill or injured people whom you "find on your doorstep" aren't always patients of your employer. His office may have been "the nearest port in a storm." Thus, after making the patient as comfortable as possible, it is essential for you to secure some information. Get it from the patient, if you can, or from his or her escort. When emergencies occur in or near physicians' offices, it is rare for the patient to be quite alone. The patient's obvious condition will determine the amount of time you devote to the task of seeking information.

It is true that accidental injuries and sudden onsets of illness may occur in the vicinity of your office, and if the doctor isn't immediately available, you, as his medical assistant, should be prepared to administer elementary first-aid and otherwise to manage the situation intelligently, calmly and professionally.

A few of the commoner emergencies that a medical assistant encounters in the office are:

Fainting	Insulin shock
Fractures	Poisonings
Burns	Heart attacks
Cuts and abrasions	Nosebleeds
Convulsions	

Of these relatively common emergencies, cuts or lacerations are probably the most frequent, and nosebleeds run them a close second. Thus it is especially important for the medical assistant to know how to stop bleeding. The best way to stop external bleeding is to apply direct pressure against the wound *until the doctor comes.* If there is a great deal of bleeding, the sponge or cloth should not be removed so that a fresh one can be substituted for it; rather, another sponge or cloth should be added and wrapped snugly. The latter technic applies additional pressure on the severed vessel, thus cutting down on the bleeding and assisting the normal clotting process.

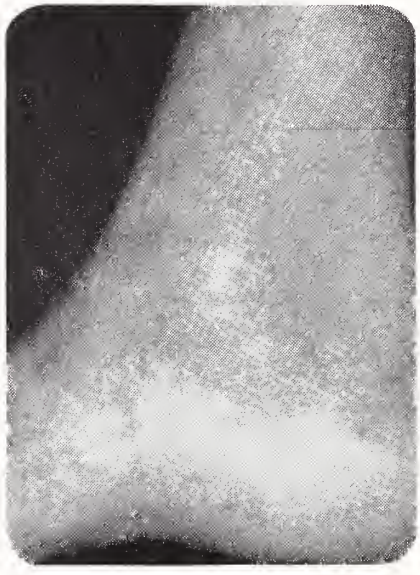
Occasionally people come to the doctor's office with nosebleeds. If the doctor isn't immediately available, the assistant should ask such a patient to tilt his head back, and she should apply a cold towel. Cooling the area will cause the blood vessels to contract. If the patient feels faint, the medical assistant should arrange to have him lie down with his head and shoulders slightly elevated.

More than for the average person, it is essential for the medical assistant to know the basic technics of first-aid. In addition, she should keep in mind the rules of the office that her physician employer has established. Knowing all of these, she will recognize emergencies, will deal with them properly, and will stay in command of each such situation.

—Marian Little

Eczema of many years... controlled in two weeks

Before treatment



After treatment — with ARISTOCORT Topical Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Available in 5 Gm. and 15 Gm. tubes and ½ lb. jars.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form.

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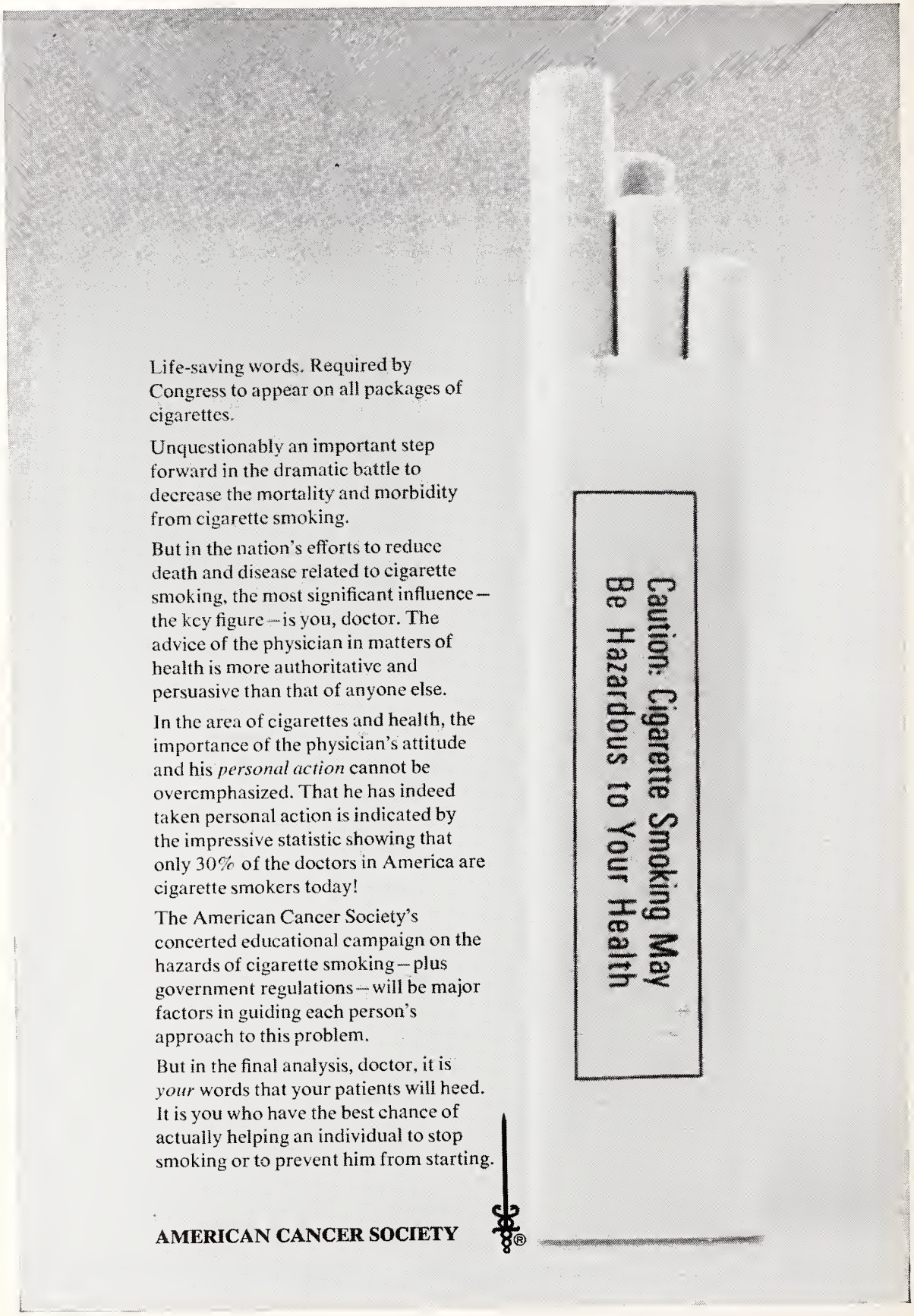

Life-saving words. Required by Congress to appear on all packages of cigarettes.

Unquestionably an important step forward in the dramatic battle to decrease the mortality and morbidity from cigarette smoking.

But in the nation's efforts to reduce death and disease related to cigarette smoking, the most significant influence—the key figure—is you, doctor. The advice of the physician in matters of health is more authoritative and persuasive than that of anyone else.

In the area of cigarettes and health, the importance of the physician's attitude and his *personal action* cannot be overemphasized. That he has indeed taken personal action is indicated by the impressive statistic showing that only 30% of the doctors in America are cigarette smokers today!

The American Cancer Society's concerted educational campaign on the hazards of cigarette smoking—plus government regulations—will be major factors in guiding each person's approach to this problem.

But in the final analysis, doctor, it is *your* words that your patients will heed. It is you who have the best chance of actually helping an individual to stop smoking or to prevent him from starting.

AMERICAN CANCER SOCIETY

Woman's Auxiliary News

From the President

When this issue reaches you, there will be much hustling to get last-minute preparations finished so that you can take a minute or two to enjoy a part of your labors. In browsing through several books and magazines, I have run across the following greetings which say much of what I should like to say to each of you:

"Holidays are great and venerable institutions, handed down to us from 'the long ago,' enlivened by quaint fancies and superstitions, and hallowed to all by many cherished associations. In whose mind are they not associated with social gatherings and family reunions—with the benevolent visits of the mysterious Santa Claus—with festivities and gaieties—with merry dance and song—with cessation of toil and ostracism of care. They alone of the year witness harmony of mind and spirit among all people. Let them be celebrated for their antiquity—for the genial feeling they inspire among all classes and conditions. As a nation we need more holidays—not so much extravagance and display, but more mirth and cheerfulness. We have 'a lean and hungry look' because we are constantly under the whip and spur—all absorbed in business, and hurrying and jostling through the world. We should have more holidays, and observe them better."—From the SIOUX CITY REGISTER, December, 1860, reprinted in THE IOWAN, December-January, 1959-1960.

May this Holiday Spirit bring each of you the choicest of blessings—good health and peace—and let us pray that strength and courage abundant be given to all who work for a world of reason and understanding, so that men will come to see more clearly—not so much what divides them as that which unites them—so that we all can live in harmony and sympathy with others.

—MRS. RALPH E. HINES, *President*

For Christmas

During the rush and hub-bub of the approaching Holiday Season let each one of us take a brief minute to reflect on the True Meaning of Christmas and offer a small prayer for peace. May each and every one of you have a joyous season!

The Editors: MRS. ROBERT FOLEY
MRS. WALTER EIDBO

Auxiliary Participates in IMS Building Dedication

Remarks by Mrs. Hines, the Auxiliary President

It is a pleasure to be with you today, and to participate in the dedication of this headquarters building. It is with pride that I tell you of the Woman's Auxiliary's hopes of contributing unique service to the medical profession and to the larger group we call the human family.

As our communications and transportation have improved, we have become neighbors to people hundreds of miles away, and thus it is increasingly important for us to try to understand what each of our neighbors has to offer, and not to make him fit into some mold that we have shaped for ourselves. It is also desirable for us to retain individuality, an attribute that was easy to acquire and to retain in a pioneer society. A statement by Edward Howard Griggs, made in the early part of this century, seems apropos: "There can be no true, individual heroism, no independent greatness, which does not spring from the heart of common humanity; and there can be no wholesome social action which does not depend upon the highest individuality."

As we try, this year, to give community service under the guidance of our doctor husbands, we hope to focus upon youth and the elderly. For youth, there are several good "package programs" available from the National Auxiliary. These include immunization, health and fitness, teenage venereal-disease control, and timely attention to the mental health of children. Some programs for the elderly include Homemaker Service, Meals on Wheels, and Voluntary Friendly Visitor Service.

Our Health Education Loan Fund assists needy students in preparing themselves for various careers in the paramedical fields. It is an adjunct to our Health Careers Clubs, which evolved from our original Future Nurses' Clubs. (At the National Conference for State Auxiliary Presidents and Presidents-Elect, this fall, a reference was made to a need for more *girls* in medical schools and for more *boys* in nursing schools.)

The American Medical Association's Education and Research Foundation (AMA-ERF) has had two principal objectives: (1) funds for medical schools—i.e., unrestricted grants to be used at the discretion of each medical school dean; and (2) a loan-guarantee fund to insure the loans that banks

grant to medical students, interns and residents. This year the Institute for Biomedical Research has been added to the AMA-ERF. There is a beautiful film entitled "A Different Drum" which gives a preview of the significance of the Institute's work. AMA-ERF richly deserves the effort the Auxiliary members expend on its behalf!

The State Auxiliary serves as a clearing house for the programs and projects that I have just enumerated, and it also serves as an information and guidance center for the county Auxiliaries. These programs constitute a catalog of choices for the individual county Auxiliaries, and we state Auxiliary officers strongly recommend that each county Auxiliary undertake only as many projects as its members can staff adequately. This year we have instituted a newsletter for Board members, and we shall also conduct a workshop, on October 25, for county officers. We hope that it will provide them the kind of inspiration that the national workshop does for state officers.

We doctors' wives are fortunate in having the Auxiliary as a means of contributing service to our respective communities and to the medical profession. May we continue to serve with diligence, humility, fortitude and talent!

Fall Conference for State Auxiliary Presidents and Presidents-Elect

The conference opened on Sunday evening, October 2, with a series of regional dinners, where we had a chance to get acquainted with our counterparts in other states in our respective regions. We had an opportunity to ask questions and to visit.

Following greetings from the national president, Mrs. Asher Yaguda, of Newark, New Jersey, the president-elect, Mrs. Karl F. Ritter, of Lima, Ohio, opened the Monday session and described the conference by saying: "We have people, purpose, planning, preparation, program priorities and partnership on three levels—a unique opportunity for interaction."

The first speaker was Ellen Winston, Ph.D., U. S. Commissioner of Welfare, who outlined the state-participation medical assistance program. It is to include: (1) Medical care for public-assistance recipients. (2) Medical care for the categorically related medically indigent, whose eligibility has been established by the states (optional). (3) All medically needy children under age 21 (optional). (4) Coverage for virtually all medically indigent individuals by July 1, 1975, including the above groups. (This is a federal requirement.)

Dr. Winston said that all states must be in a position to go into Title XIX by 1970 if they are to continue receiving matching federal medical-care funds for persons receiving public assistance. By July, 1967, all participating states must offer skilled nursing home services to anyone over age 21 who needs long-term care, and must provide physicians' services in the home if the patient requires them.

Charles L. Hudson, M.D., of Cleveland, the AMA president, pointed out that Title XIX can be either a blessing or a calamity, depending on the wisdom of the state legislatures that implement it. "Although the AMA supports the concept of the program," he said, "we are concerned about the extensive benefits offered, with no coinsurance, no deductibles and no age factor." He suggested the following amendments: (1) direct payment to the patient; (2) free choice of physician; (3) reimbursement for medical expenses on the basis of usual and customary charges; (4) encouragement of the use of insurance carriers in the implementations by states; (5) assurance that federal contributions shall not be affected by the identity of the state agency that insures the expense; (6) intrastate variability as regards eligibility requirements; and (7) an advisory council including some physicians.

We then heard of two plans for the implementation of Title XIX. One was presented by Henry Fineberg, M.D., of the Medical Society of New York. The sweeping program that he outlined hasn't yet been approved. Its eligibility requirements are quite liberal and across-the-board, and the Medical Society had no voice in planning it—only an opportunity to propose amendments after the law had been signed.

The other plan, presented by Mr. Howard Hassard, executive director of the California Medical Association, had been drawn up in a different manner and was far less inclusive. The California law had been drafted by the Medical Association. The physicians had been in on every stage of the planning, and the measure provides that the needs of the medically indigent are to be determined on an individual basis.

Dean Roberts, M.D., of the Commission on Community Health Services, was the final morning speaker. He pointed out that communities haven't kept pace with the increasing complexities of health services, and that communities haven't been clearly defined. Each individual is a member of overlapping health communities. "We must have a health service planning area which coincides with the health market area," he asserted.

The luncheon speaker on Monday was Patricia Lanier, M.D., of Milwaukee, vice-president for the NEC Region of the American Association of University Women. She urged the Auxiliary members to develop, among groups in their communities, a concern to be women of action, and to be individuals rather than to develop an image. "Too many are afraid to assume the role of leadership," she said, "for they are afraid of stepping on toes and being disliked." She thinks we must encourage women to think for themselves and to seek out the truth. Also, in her opinion, we must broaden the concerns of our organizations and must make our opinions known. Our leadership

must be based on the use of brains, rather than of emotions.

Three national organizations presented specific action programs Monday afternoon. Mrs. Abbott C. Mills, director, American Red Cross, declared: "In natural disasters, the Red Cross's responsibility is to the individual. We must determine not only how to care for people during a disaster, but what each person needs to return to normal life."

Mrs. J. S. Van Wert, regional chairman, American Farm Bureau Women's Committee (an Iowan), said, "Technology and specialization have changed the farm scene. With this growth comes greater investment in business, leading to greater mental strain. We urge our state and county groups to participate in all rural health activities, and among our current programs are tetanus campaigns, school health clinics and educational programs on related animal and human diseases."

Mrs. John A. Campbell, chairman, League of Women Voters education fund, said: "Women must learn political skills, for today all levels of government are active in all phases of life. Goals can be achieved only by organized efforts. Pressure groups are a necessity for a democratic government."

The Tuesday meetings began with two "early bird" programs. At one of them, Mrs. Herbert L. Mantz, of Kansas City, Missouri, presented a parliamentary-procedure course, and at the other Mrs. Marilyn M. Benson, of the AMA Communications Division, led a discussion on practical publicity. The rest of the morning was devoted to presentations on three Auxiliary direct-service projects for the homebound and elderly. Our own Mrs. Allan Phillips, homemaker service chairman, presented Mrs. Frieda Engel, of the Jane Addams Graduate School of Social Work at the University of Illinois, who emphasized the urgent and increasing need for home care for the aging.

Mrs. Floyd K. Anderson, of Hollywood, California, the national chairman presented a lantern-slide program on the San Francisco Auxiliary's Meals-on-Wheels project, and described its establishment and operation.

The third presentation was a skit and talk on the Voluntary Friendly Visitor Training program. Miss Adriane V. Duffy, director of the New Jersey project, said: "Our traditional family and neighborhood supports in times of illness and adversity have almost entirely disappeared. Unfortunately, this cultural change has had its greatest impact upon the homebound, chronically ill and socially isolated individual." The New Jersey program which to date has trained 798 Friendly Visitors, is based on: careful screening of applicants; selective placement of visitors; supervision by accredited persons; a phased programs for developing community support and stimulating interest in recruitment; and training the volunteers to mobilize personal assets.

Concluding the Tuesday morning program was "Read It in MD'S WIFE," a behind-the-scenes look at the business, production and editorial operation of the Auxiliary's magazine, presented by the editor, Mrs. John Wagner, of Clarks Summit, Pennsylvania, and Mrs. C. Rodney Stoltz, of Watertown, South Dakota, the communications committee chairman. It was a clever takeoff on the Huntley-Brinkley news program.

His Excellency, Vu Van Thai, ambassador of South Viet Nam to the United States, was guest of honor at the Tuesday luncheon. Highlighting the impact of medical programs on the South Vietnamese people, the ambassador pointed out that there is only one physician for each 50,000 civilians, and that the life expectancy of an infant born there today is, at best, 35 years. "Viet Nam," he said, "is a reservoir of virtually every disease known to mankind." He also said that our medical teams are treating an average of 40,000 patients a month, and that immunization vaccines against cholera, plague and polio were administered to more than 13 million in the first six months of this year. He was strong in his praise of the American people, saying, "They believe that technical progress belongs to the entire mankind, and they try to soothe the drama of ill-distribution by bringing to the disinherited a part of their privileges."

Norman Hoover, M.D., a Mayo Clinic orthopedist, emphasized that volunteer physicians serve a real need for the Vietnamese people, but that the solution is adequate educational personnel and facilities for training the Vietnamese. To bring medical students from Viet Nam to this country for training would be a mistake, for we live in such different economic and social circumstances that the training would be inappropriate. For example, Dr. Hoover said, no United States medical school would give them adequate training in infectious diseases, for our country no longer has the diseases that afflict the Vietnamese. Dr. Hoover has served in Viet Nam four times, so he speaks from experience.

Ernest B. Howard, M.D., AMA Assistant Executive Vice President, then showed slides of his study tour of Viet Nam, and described the AMA Volunteer Physician Program and medical education plan.

The 1966 Conference ended with a dinner sponsored by AMPAC, at which Representative Donald Rumsfeld (R-Illinois) was guest speaker. He emphasized the need for Congress to take a good look not only at the legislation it has passed and is considering, but also at its procedures.

It was a privilege to attend this Fall Conference and it is our hope to share and spread the valuable information learned there. If your president or president-elect can supply any details on the conference, please let us hear from you.

—FRANCES HINES, *President*

News From Around the Hawkeye State

Black Hawk County

The Medical Auxiliary of Black Hawk County held its October meeting with a dinner in the home of Mrs. Robert Bailey, 2315 West Fourth Street, in Waterloo. Twenty members were present. The program was a "Know Your Neighbor" panel, moderated by Mrs. Henry Hoover.

The Black Hawk County Medical Auxiliary sponsored a vision screening program for preschool children in October. The screening was done by volunteers from the Auxiliary who had been trained for the program. The screening was available free of charge to four- and five-year-old children who had not started kindergarten. The program was sponsored in conjunction with the Black Hawk County Medical Society, the National Society for the Prevention of Blindness and the school authorities, and it was set up in public and parochial schools in Waterloo, Cedar Falls, Evansdale, Gilbertville, LaPorte City and Elk Run Heights.

Buchanan County

A benefit card party was held by the Woman's Auxiliary to the Buchanan County Medical Society. Bridge and five-hundred were played, prizes were awarded, and refreshments were served. Approximately 180 tickets were sold, and a share of the proceeds will go to AMA-ERF. Mrs. L. John Flage was chairman.

Cerro Gordo County

Members of the Woman's Auxiliary to the Cerro Gordo County Medical Society were hostesses to the 50 members of Future Nurses Clubs of the Mason City High School and Newman High School at a tea in the home of Mrs. Harold Brenton, on Friday, October 21. Mrs. Robert Layfield talked on dietetics and nutrition as a career open to women in the health field. Discussion followed.

The regular November meeting of the Auxiliary was held at the home of Mrs. George Tice, with members of the Medical Assistants as guests.

Clinton County

The annual holiday charity ball for the benefit of the three Clinton County Hospitals will be held at the Clinton Country Club December 3. Mrs. Wallace Ash, of DeWitt, is a member of the invitation committee. The Lawrence Foster orchestra will play for the dance.

Marion County

The Marion County Medical Auxiliary held its August meeting in the new home of Mrs. Earl McKeever. The afternoon was spent socially, and the highlight was the presentation of baby gifts to Mrs. Alan Patterson. Assistant hostesses were Mrs. Robert McClung, Mrs. Charles Burroughs and Mrs. C. J. Ryan.

On October 18 the Marion County Medical Auxiliary was entertained by the Mahaska County Medical Auxiliary for luncheon at the Elmhurst Country Club. Mrs. Ellis Duncan, the Mahaska County president, introduced the guest speakers, Mrs. R. E. Hines, president of the Iowa Medical Auxiliary, and Mrs. E. A. Vorisek, the state Auxiliary's finance secretary.

The October meeting of the Marion County Medical Auxiliary was held at the home of Mrs. Charles Burroughs, with Mrs. Charles Green as co-hostess. As county president, Mrs. Burroughs presided at the business meeting, and plans for the year were discussed. Mrs. Robert Schaap was a guest.

Polk County

The Woman's Auxiliary to the Polk County Medical Society met for luncheon at 12:30 p.m., Friday, October 14, in the Cloud Room at the Des Moines Municipal Airport.

Mr. Frank Miller, editorial cartoonist for the DES MOINES REGISTER exhibited and commented upon several of his past and present cartoons. Mrs. Loren Peterson is program chairman for the Auxiliary. Mrs. Harlan K. Rosenberg, the social chairman, was assisted by Mrs. James Ryan and Mrs. Norman K. Rinderknecht.

The November meeting was held at Hoyt Sherman Place. Mrs. Helen Leas, probation officer for Polk County Juvenile Court, spoke on "Teens in Trouble." A film on teen-age venereal disease, "Dance, Little Children, Dance," was shown. Mrs. Rosenberg was assisted by Mrs. Harold McCoy and Mrs. Norman Rinderknecht in the meeting arrangements.

Woodbury County

The October meeting of the Sioux Med Dames, the Auxiliary to the Woodbury Medical Society, was a 1:00 o'clock luncheon at the home of Mrs. Omar Stauch, 4000 Country Club Boulevard. Mrs. Donald Kivlighn served as hostess with assistance from Mesdames George Skorey, Edward Honke and Horst Blume. Plans were discussed for the annual Homebound Handcraft Sale in November.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

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MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

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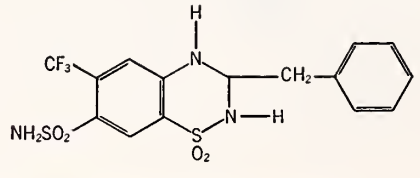

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or high blood pressure

Personals

Dr. Parker K. Hughes, of Des Moines, was elected vice-president of the Central Association of Obstetricians and Gynecologists at the organization's meeting in Biloxi, Mississippi, on October 21.

At a meeting of St. Mary's Altar Society, in Solon on October 20, **Dr. Montague S. Lawrence,** of the Department of Surgery at the U. of I. College of Medicine, related some of his experiences aboard the hospital ship *Hope,* and illustrated his talk with motion pictures.

The speaker at an area nurses' meeting held in the Floyd County Memorial Hospital, Charles City, on October 20, was **Dr. Robert Huber,** of Charter Oak. His topic was "Upper Respiratory Infections in Children."

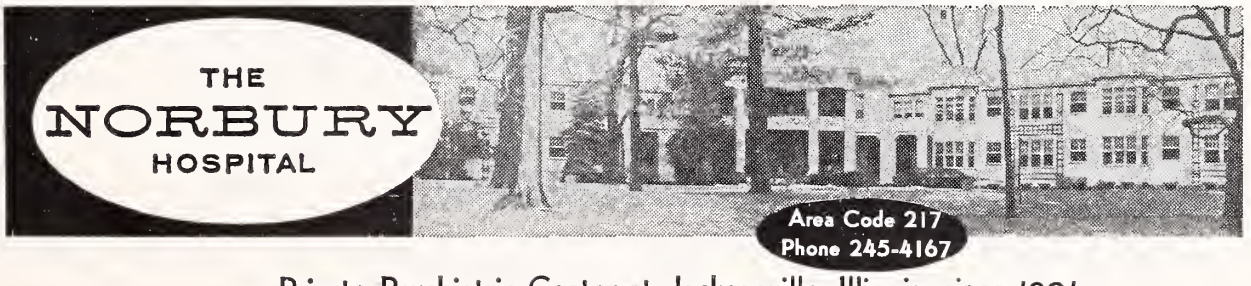
Dr. John H. Sunderbruch was one of six alumni to whom St. Ambrose College gave merit citations at its homecoming ceremonies on November 5. They were honored for "individual service to humanity." Dr. Sunderbruch is a Davenport general practitioner, and a member of the IMS Board of Trustees.

A $454,000 experimental children's medicare program, designed to operate as a Community Action program under the Office of Economic Opportunity, was terminated suddenly in mid-October. It was to have served 1,500 youngsters in Clarke, Wayne, Lucas and Decatur Counties. The project chief, **Dr. John C. MacQueen,** of the U. of I. Department of Pediatrics, said it had been impossible to secure a medical director to head the program, or more than two paramedical people to staff it. **Mr. John Garfield,** director of physiologic services for the State Services for Crippled Children, submitted his resignation soon afterward, acknowledging that a disagreement about continuing the four-county project was responsible for his decision.

Dr. Samuel J. Fomon, a professor of pediatrics at the U. of I. College of Medicine, received the Borden Award for outstanding research at the annual meeting of the American Academy of Pediatrics, in Chicago on October 24. The award consisted of $1,000 and a gold medal, and Dr. Fomon received it for his contributions to a broad understanding of body composition during infancy, and for producing data necessary to a relating of nutrition to normal growth and development.

As one of a series of adult-education lectures being given in a high school auditorium in Cherokee, **Dr. John J. Worthington,** a member of the staff at the mental health institute there, spoke on "Psychiatry for the Layman" October 20.

Representatives from eight states attended a regional conference of the American Association of Medical Society Executives, October 25 and 26,



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at the headquarters building of the IMS, in West Des Moines. The speakers included **Mr. Richard A. Anderson,** of Chicago, senior vice-president of the organization; **Mr. Frank Woolley,** field representative of the AMA; **Mr. Kenneth Barrows,** of Des Moines, second vice-president, claims, Bankers Life Co.; **Dr. S. P. Leinbach,** Belmond, president of the IMS; and **Mr. Donald L. Taylor,** executive vice-president of the IMS.

A third edition of **Dr. John A. Gius**'s FUNDAMENTALS OF GENERAL SURGERY has been issued by Year Book Publishers, Chicago, and translations of it are soon to appear in Germany and India. The first edition was published in 1957. Dr. Gius is a professor of surgery at the U. of I. College of Medicine.

Dr. William McCabe began general practice in mid-October with the Northwest Medical Group, at 430 West Thirty-fifth, in Davenport, the town where he spent his boyhood. He is a graduate of St. Ambrose College and of the Creighton University Medical School. He and his wife have two children.

Dr. Robert E. Carter, a professor of pediatrics and the associate dean for postgraduate medical education at the U. of I. College of Medicine, **Dr. Paul S. Rhoads,** a professor of medicine at the Northwestern University College of Medicine, and **Rev. Paul B. McCleave,** Chicago, a member of the AMA staff, were three of the speakers at a U. of I. seminar on religion and medicine in Iowa City during the third week in October.

Dr. A. William Horsley was elected president of the Woodbury County Heart Association at a dinner meeting of the organization in Sioux City on October 19.

Over 1,000 people from Remsen and nearby communities gathered at the Remsen-Union High School on October 18 to bid farewell to **Dr. F. D. Christensen,** who was about to move to Sioux City because of his need for extrarenal dialysis every four days. A news item in the LEMARS SENTINEL for October 20 suggested that he might eventually undergo a kidney transplant in Denver. The Remsen people have formed a blood-donor group for his benefit, and have set up a fund to help defray his hospital expenses. Dr. Christensen has practiced in Remsen for 16 years with **Drs. Louis A. George** and **William E. Erps.**

Dr. J. W. Ryan discussed anesthesiology at the October 26 meeting of the Des Moines chapter of the Iowa Association of Medical Assistants.

Dr. Neil McGarvey represented the Polk County Medical Society in addressing a meeting on retirement planning held in North High School, Des Moines, on November 8. The program was one of a series entitled "Plan for Living," sponsored by the Des Moines Council of Social Agencies, business and labor groups, and the Des Moines Public Schools.

At the November 10 meeting of the Linn County Medical Society, held at the Elmcrest Country Club, Cedar Rapids, **Dr. Brian F. McCabe,** head of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, spoke on the topic, "What's New in Otolaryngology."

The guest speaker at the November 10 meeting of the Woodbury County Medical Society was **Dr. Thomas C. Piekenbrock,** of Dubuque, chairman of the IMS Subcommittee on Mental Health. His topic was "An Investigative Discussion of Community Mental Health." The meeting was held at the Sioux City Country Club.

Dr. R. J. Ferlic reopened his office in Carroll on November 7, after completing a six-month postgraduate course in physical medicine and rehabilitation at the West Side Veterans Administration Hospital, in Chicago.

Dr. S. F. Crynes, pathologist at the Graham and St. Joseph Hospitals, in Keokuk, addressed a meeting of the Community Nurses' Organization there, on November 10. His topic was the Papanicolaou test, and he emphasized the responsibilities of nurses in connection with it.

"The Physician Makes a 'House' Call" was the title of the address given by **Mr. Bernard P. Harrison,** of Chicago, staff liaison for the AMA Council on Legislation, to a joint meeting of the Dubuque County Medical Society and Bar Association on election-night, November 8. By "House," he referred to the U. S. House of Representatives.

Dr. Ian M. Smith, a professor of internal medicine at the U. of I., has been named by the National Academy of Sciences to a five-man committee which is to study about 200 different antibiotics first marketed before 1962, in an attempt to determine their safety and current effectiveness. It will then serve in an advisory capacity to the Food and Drug Administration regarding which ones should continue on the market.

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Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Do not use in patients taking MAO inhibitors. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester. *Side effects:* Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

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A team from the Cherokee Mental Health Institute consisting of **Dr. Karl A. Catlin**, the superintendent of the institution, **Mr. James Irwin**, a clinical psychologist, and **Mr. C. Bruce Grossman**, a psychiatric social worker, held open house on Sunday, October 30, at the newly-established Southwest Iowa Mental Health Center, in Atlantic. For the present, apparently, the Atlantic establishment is to have no permanent staff other than a receptionist, and patients will be seen only on Tuesdays, from 9:00 to 4:00, when Dr. Catlin and his associates are to be there. **Dr. Einer M. Juel,** of Atlantic, is a member of the Board of Directors for the new Center.

Dr. William B. Bean, head of internal medicine at the U. of I., spoke on "Osler, Trollope and the Fixed Period" at a meeting of the American Clinical and Climatological Association that was held in Ponte Vedra, Florida, from October 30 through November 2.

Dr. John Walker, who took his medical degree at the U. of I. and interned at University Hospitals, Iowa City, joined the staff of the Glenwood State Hospital-School late in November. He had practiced for two years in Arlington and MacLean, Virginia, both suburbs of Washington, D. C., and in coming to Glenwood he returned to his boyhood home town. He and Mrs. Walker have a 15-month-old child.

At the annual meeting of the Public Health Nursing Association, held at Hotel Hanford, Mason City, on November 8, **Dr. J. Richard Utne,** a Mason City radiologist, spoke on " 'Hope' in Nicaragua." *Hope,* of course, is the name of the hospital ship on which Dr. Utne and several other Iowa physicians have served recently. During his term of service, it was docked at a port in Nicaragua.

Dr. P. J. Monnig succeeded **Dr. J. P. Tiedeman** as president of the medical staff at St. Joseph Mercy Hospital, Sioux City, on November 8. **Dr. R. L. Morgan** was chosen as vice-president (tantamount, apparently, to president-elect), and **Dr. A. D. Blenderman** was chosen as secretary-treasurer, succeeding **Dr. A. H. Kelly.**

Dr. John F. Hardin, of Bedford, has received a 20-year certificate for service to his local Selective Service Board.

Lectures on thromboembolic disease were given in late October and November by three U. of I. College of Medicine faculty members at the St. Joseph Mercy Hospital, Waverly, under the auspices of the Iowa and American Heart Associations. **Dr. John Hoak** spoke there on October 26; **Dr. Kenneth L. Walgren,** on November 8; and **Dr. William Connor** on November 29. The series was part of an experiment in continuing medical education for the medical staffs of small hospitals.

The Woodbury County Board of Supervisors voted on November 7 to close the medical clinic operated in Sioux City under the direction of the Woodbury County Medical Society, as of December 31, 1966. Thereafter, county patients are to be sent to individual physicians for treatment. A similar arrangement with the Sioux City Dental Society is to be terminated, and patients are to be sent to individual dentists. Finally, a drug dispensary is to be taken over by the Board, and a pharmacist and a clerk will be hired to operate it.

A remodeling and enlarging project, underway for the past year, has been completed at the Family Medical Center, operated by **Drs. R. M. Collison, Sidney A. Smith** and **N. L. Saxton,** in Oskaloosa.

At Broadlawns-Polk County Hospital, Des Moines, **Dr. Clysta Richard** and **Dr. Beverly Robinson** have given up the responsibility they shared for all obstetrical and gynecologic work there. A news story in the November 9 DES MOINES REGISTER implied that they devoted about 20 hours per week, each, to that service, and shared $6,200 per year in recompense. Physicians on all the other services at Broadlawns serve in rotation and without pay, but obstetrics, in particular, frequently takes up large blocks of time and cannot so easily be shared in that way at a hospital for medical indigents. Henceforth it probably will be necessary for Polk County to recompense physicians for obstetrical and gynecologic services on a fee basis, and the authorities are understandably concerned lest practitioners rendering other sorts of care grow dissatisfied.

The Broadlawns Hospital Trustees have appointed **Dr. Edward R. Posner, Jr.** director of medical education. He has terminated his general practice, and will receive a salary from the Hospital.

Dr. Addison W. Brown, a Des Moines gynecologist, addressed the Audubon County Chapter of the American Cancer Society, in Audubon, on November 14.

Early in November, **Dr. S. M. Lehr,** of Cedar Rapids, president of the Linn County Medical

Society, issued a statement urging everyone in the county to cooperate by securing initial immunizations or booster shots against various diseases and by submitting to the tuberculin test. He referred to DPT and to polio, measles and smallpox vaccines, and assured the public that children or adults unable to pay could get whatever immunizations they might need, free of charge, from their family physicians.

On November 5, the Mahaska County Medical Society and the Mahaska County Nurses Association conducted single-dose oral-polio-vaccine clinics in Oskaloosa and Fremont. The sponsoring organizations pointed out that current concepts dictate the administration of a booster dose every two years, and that most people received their first doses in 1963.

An announcement was made on October 20 that the U. of I. College of Medicine has received a grant of $130,000 to continue its research on leptospirosis. Specific aims of the current phase of the project are to study the survival of disease-causing leptospiral organisms in lakes, ponds and streams of Iowa, and to clarify their public-health significance.

Dr. Walter M. Kirkendall, professor of medicine at the U. of I. College of Medicine and president of the Iowa Heart Association, was one of the guest speakers at a meeting of the Mississippi Valley Division of his organization, in Clinton on October 13.

Dr. Joseph Song, pathologist at Mercy Hospital, Des Moines, presented a paper at the Ninth International Congress for Cancer Research, in Toyko, late in October. While in the Orient, he planned to visit friends and relatives in Seoul, Korea, whom he last saw 14 years ago.

Dr. Earl V. Andrew, of Maquoketa, has been elected to membership in the American Academy of General Practice. In announcing that event, the Maquoketa weekly newspaper, the COMMUNITY-PRESS, mentioned that Dr. Andrew is the author of a regular feature, "Iconoclast," that appears in its columns.

At a regional conference of the American Association of Medical Society Executives, October 25-26, the Iowa Medical Society was host to over 30 city and state executives from Iowa, Minnesota, South Dakota, Wisconsin, Nebraska, Indiana, Ohio and Colorado. Three representatives from the AMA Field Service Division also attended the meeting. Pictured above, Donald L. Taylor, Executive Vice-President of the Iowa Medical Society, introduced E. M. Kingery, Secretary, Polk County Medical Society. Mr. Kingery reminisced about his 36 years in medical society work.

While **Dr. J. E. Rose**, of Grundy Center, was attending a patient at the hospital there, on Sunday night, October 2, someone stole the storage battery from his car. Subsequently it was suspected that two young men who had brought in the patient might have made off with the doctor's battery. They were found, and the missing battery was in their car.

Dr. N. E. Weems, a Paullina physician, was honored on October 11 for completing 50 years as a member of the Masonic Lodge. His friends made him guest-of-honor at a dinner.

Dr. Joseph Schupp spoke on "Teen-Age Health Problems" at a meeting of the Dowling Guild, on the afternoon of October 13, in the Dowling High School gymnasium, at Des Moines.

The parents of **Dr. Jo Ellen Maly**, a second-year interne at Broadlawns-Polk County Hospital, Des Moines, have announced her engagement to **Mr. Steven S. Hoth,** a recent graduate of the U. of I. College of Law who currently is clerk for **Hon. Charles J. Vogel,** chief judge of the Eighth Federal Circuit Court of Appeals, in Fargo, North Dakota. Dr. Maly and her fiance both took their bachelors' degrees at Grinnell College.

Dr. Marion E. Alberts, of Des Moines, was elected president of the History Club of the American Academy of Pediatrics, at the Academy's annual meeting in Chicago on October 25. He had previously served as secretary of the club.

The Association of Life Insurance Medical Directors made **Dr. Wm. O. Purdy**, of Des Moines, its president-elect at its annual meeting in New York City, in October. Dr. Purdy is vice-president and medical director of the Equitable Life Insurance Company of Iowa.

Mr. L. W. Knapp, Jr., chief of the Accident Prevention Section of the Institute of Agricultural Medicine, at the U. of I. College of Medicine, has been appointed to a two-year term on the U.S.P.H.S. Advisory Committee on Accident Prevention.

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The guest speaker at the November 16 meeting of the Polk County Medical Society, held at the IMS headquarters building in West Des Moines, was **Dr. F. J. L. Blasingame,** of Chicago, executive vice-president of the American Medical Association. He spoke on "Medical Practice—Its Future."

The November 2 meeting of the Johnson County Medical Society was held at the Oakdale Hospital, in Oakdale. **Dr. J. L. Ehrenhaft,** professor and chairman of the Division of Thoracic Surgery, at the U. of I. College of Medicine, discussed "The Surgery of Pulmonary Tuberculosis—Past and Present."

The annual meeting of the Midwest Region, American Association of Psychiatric Clinics for Children was held at the U. of I. Psychopathic Hospital on Friday and Saturday, November 4 and 5. The topics included various child-behavior problems and nervous disorders, and administrative procedures for day hospitals and child-psychiatry departments. The guest speakers included **Dr. Milford E. Barnes, Jr.,** of the Des Moines Child-Guidance Center; **Dr. Paul Laybourne,** of the Division of Child Psychiatry, University of Kansas Medical Center, Kansas City; and **Dr. Alexander Lucas,** of the Hawthorne Center, Northville, Michigan. The U. of I. faculty members who had parts in the program were **Drs. Paul E. Huston,** professor and head of psychiatry; **Richard L. Jenkins,** professor of child psychiatry; **George Challas,** resident in child psychiatry; and **Gerald Solomons,** director of the U. of I. Child Development Clinic; and **Mr. Donald L. Carr,** an assistant professor, **Mr. Wayne Koenen,** an educational psychologist, and **Miss Elizabeth Thomas,** an assistant professor, all from the U. of I. College of Education.

Barry J. Anson, Ph.D., a research professor of otolaryngology and maxillofacial surgery at the U. of I., has received an award of merit from the American Academy of Ophthalmology and Otolaryngology. He has been cited for contributions he has made, during more than 20 years, to the Academy's postgraduate education sessions at its annual meetings. Dr. Anson came to the U. of I. in 1962 after retiring as Robert Laughlin Rea Professor and chairman of the Department of Anatomy at the Northwestern University College of Medicine. He is a native of Muscatine.

Dr. Walter M. Kirkendall, a professor of internal medicine and the head of cardiovascular research at the U. of I. College of Medicine, has been elected to a two-year term as chairman of the medical advisory board of the Council for High-Blood-Pressure Research. The Council is composed of 200 leading physicians and researchers, and constitutes a major branch of the American Heart Association. This year it participated in presenting two $25,000 Stouffer Awards to scientists for outstanding research contributions in the fields of hypertension and arteriosclerosis. Also, Dr. Kirkendall currently is president of the Iowa Heart Association.

Following the annual meeting of the American Heart Association in New York City, late in October, at which he was installed as president of the organization, **Dr. Lewis E. January,** a professor of internal medicine at the U. of I., went to New Delhi, India, to serve as the American representative at the World Congress of Cardiology.

Two U. of I. physicians, **Drs. Samuel J. Fomon** and **Mark A. Immergut,** spoke at the 35th annual meeting of the American Academy of Pediatrics held in Chicago Oct. 22-27. During the general session, Dr. Fomon presented a paper on the changing body composition of the "male reference infant" during the first year of life, and Dr. Immergut presented a paper at a session of the urology section.

Dr. Leon G. Handke has joined **Dr. Felix Hach** in general practice at Ankeny. Dr. Handke attended the University of Nebraska College of Medicine and served a rotating internship at Broadlawns Hospital in Des Moines.

A basic text in human anatomy by **Dr. Helen L. Dawson,** associate professor of anatomy and histology at the U. of I. College of Medicine, has been published. Dr. Dawson has been a U. of I. faculty member since 1932. The book, BASIC HUMAN ANATOMY was not written as a laboratory text. Dr. Dawson has used a systemic approach to anatomy rather than a body region approach. Beginning with a discussion of man and his place in the animal kingdom, the text follows a consideration of the cell and the organization of cells into tissues, tissues into organs, and the grouping of organs to form systems.

Dr. Paul V. Hart, a staff physician at the Woodward State Hospital and School, spoke in Emmetsburg October 11. His topic: "Mental Retardation in the Community."

Dr. George G. Caudill, of Des Moines, discussed

"Pediatric Allergy" at the Woodbury Medical Society meeting on October 20.

Dr. Oscar Alden, of Red Oak, has been elected to active membership in the American Academy of General Practice.

Dr. Irving Ringdahl, of Elkader, was reelected president of the Clayton County Chapter of the American Cancer Society at its annual meeting held in Elkader.

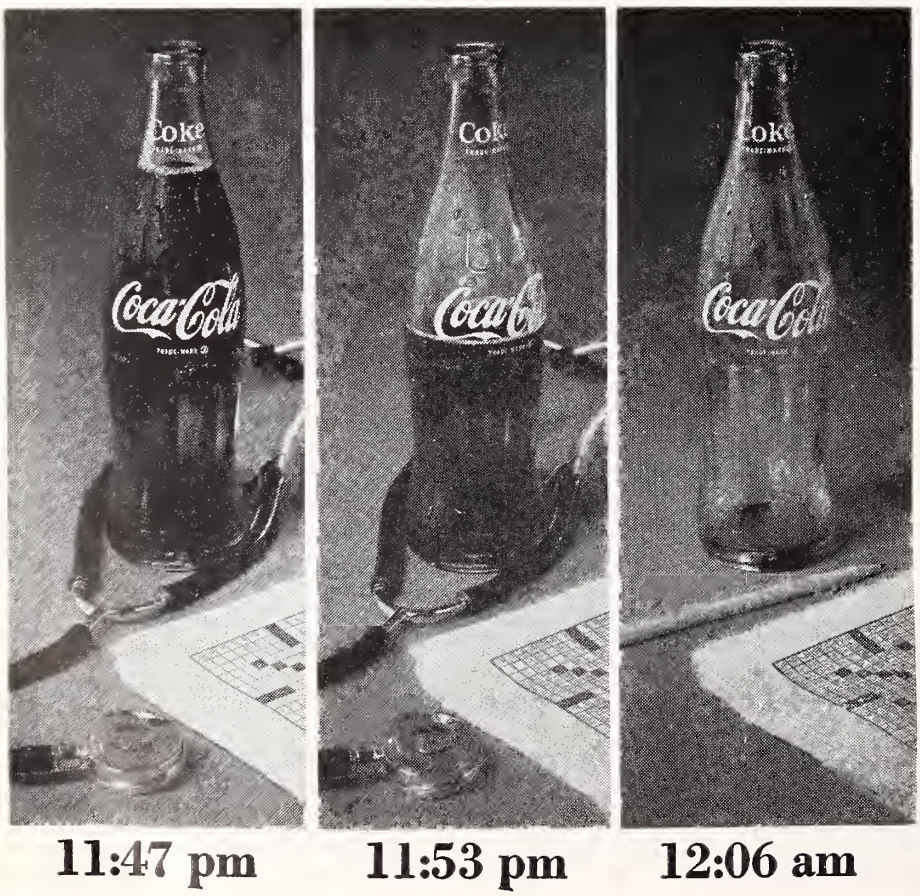
Dr. Jose Martinez, of Council Bluffs, spoke at a convention of the South Central Section of the American Association of Urologists in Mexico City on October 18. Dr. Martinez also presented a paper on clinical and surgical aspects of cancer of the external genitalia.

Dr. George Scanlon, of Iowa City, completed his voluntary tour of duty aboard the hospital ship, *Hope,* on November 15. He will be returning to his home in Iowa City soon.

Titus C. Evans, Ph.D., professor and head of the of the Radiation Research Laboratories at The University of Iowa, is the most recent recipient of the American Cancer Society's highest volunteer award. The Bronze Medal award of the Society was presented to Dr. Evans for his outstanding contributions to the progress of cancer control. Dr. Evans served as president of the Iowa Division of ACS in 1965, was the Division's crusade chairman in 1963, and has been a member of the Division's executive committee and a member of its board of directors. He also serves as chairman of the division's awards and grants committee, which governs Division-sponsored cancer research projects in Iowa. Dr. Evans is a long-time member of the board of directors of the Johnson County Chapter of the Society, and currently serves as chairman of that group.

Mr. Donald Neumann, an executive assistant on the staff of the Iowa Medical Society for about two and a half years, resigned as of December 1 to take a public relations job with Iowa Power and Light Company, in Des Moines. Mr. Neumann has had charge of assembling county ranges of physicians' fees, he has designed various brochures and

(Continued on p. 1280)



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Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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vignettes of angina pectoris—
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angina and the surgeon

John Hunter—
British surgeon (1728-1793)

angina of anger

"My life is in the hands of any rascal who chooses to annoy and tease me."[1] So said the great British surgeon and anatomist, John Hunter, realizing that he could not control the anger which precipitated frequent and severe attacks of angina pectoris. According to Mettler: "His statement was no exaggeration. On October 16, 1793, he attended a meeting of the St. George's hospital staff, and, while defending the interests of several students, he was contradicted and thoroughly antagonized. The pains of angina commenced, he started toward another room, gained it, and fell dying into the arms of a physician."[2]

Why Edward Jenner withheld his paper on angina In 1777, at an earlier stage of the condition, Hunter's angina alarmed a favorite pupil, Edward Jenner, who wrote to Dr. Heberden that he feared his teacher was "affected with symptoms of the Angina Pectoris."[3] So concerned was Jenner about his former teacher's emotion-related condition that he deliberately cancelled publication of a paper on angina pectoris, fearing that Hunter would read it, and have "his fears excited by its truly formidable nature."[4]

Severity of angina described Hunter's brother-in-law, Dr. Everard Home, who witnessed l death and performed an autops gave this account of the later st of the condition:

"... the pain became excruciati at the apex of the heart; the thr was so sore as not to allow of an attempt to swallow anything an the left arm could not bear to be touched....

"The affections above described were, in the beginning, readily brought on by exercise... but th at last seized him when lying in bed, and in his sleep...."[5]

18th century ancestor of the modern coronary candidate Surgeon, anatomist, pathologist, physiologist, geologist, and teach Hunter had a passion for researc which led him to disregard his practice, his health and even the

aw. When the Irish giant O'Brien earned that Hunter desired his skeleton for a museum, he willed that his body be sunk at sea in a lead coffin. But Hunter was not to be denied. According to Major, he "... bribed the watchers and finally obtained the body at a cost of 500 pounds although he had to borrow the money to pay the men."[3]

In 1767, he experimentally inoculated himself with gonorrhea and syphilis, treated himself with mercury for three years, and was apparently cured.[5] Hunter had feelings of inadequacy about his education and speaking ability, but this did not prevent him from being hard driving and abrupt with his colleagues. His competitiveness with his physician older brother was also well known, and ended in complete estrangement between the two men.[2,3] Today, the personality traits seen in John Hunter are recognized to be important predisposing factors in the development of coronary artery disease—often manifested as angina pectoris. According to Friedman and Rosenman,[6] in a group of men whose behavior was characterized by intense ambition and competitive drive, a greater than average incidence of angina pectoris was among those abnormal conditions noted.

References: 1. Paget, S., cited by Mettler, C. A.: History of Medicine, Philadelphia, The Blakiston Company, 1947, p. 85. 2. Mettler, C. A.: *Op. cit.*, pp. 84-85. 3. Major, R. H.: A History of Medicine, Springfield, Ill., Charles C Thomas, 1954, vol. 2, pp. 601-607. 4. Baron, J., cited by Major, R. H.: *Op. cit.*, p. 607. 5. Major, R. H.: Classic Descriptions of Disease, ed. 3, Springfield, Ill., Charles C Thomas, 1955, p. 423. 6. Friedman, M., and Rosenman, R. H.: J.A.M.A. *169*:1286, 1959.

in the modern management of angina pectoris

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Peritrate (pentaerythritol tetranitrate) is a nitric acid ester of a tetrahydric alcohol (pentaerythritol).

Actions: The exact cause of angina pectoris (that is, the pain associated with coronary artery disease) remains obscure, despite the numerous and often conflicting hypotheses concerning its pathophysiology. Therapy at the present time, therefore, remains essentially empiric. Customarily, clinical improvement has been measured by: reduction in (1) number, intensity and duration of angina pectoris attacks and (2) necessity for glyceryl trinitrate intake for prevention or relief of anginal attacks.

Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. has been reported in clinical usage to reduce in number and severity the incidence of angina pectoris attacks, with concomitant reduction in glyceryl trinitrate intake.

In the evaluation of Peritrate (pentaerythritol tetranitrate) and Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. in angina pectoris, clinical improvement has been customarily measured subjectively by reduction in number and severity of attacks and necessity for glyceryl trinitrate intake for prevention or abortion of anginal attacks. Individual patterns of angina pectoris differ widely as does the symptomatic response to antianginal agents such as pentaerythritol tetranitrate. The published literature contains both favorable and unfavorable clinical reports. In conjunction with total management of the patient with angina pectoris, Peritrate (pentaerythritol tetranitrate) and Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. have been accepted as safe for prolonged administration and widely regarded as useful.

Animal pharmacology: In a series of carefully designed studies in pigs, Peritrate (pentaerythritol tetranitrate) was administered for 48 hours before an artificially induced occlusion of a major artery and for seven days thereafter. The pigs were sacrificed at various intervals for periods up to six weeks. The result showed a significantly larger number of survivors in the drug-treated group. Damage to myocardial tissue in the drug-treated survivors was less extensive than in the untreated group. Pigs rather than dogs were used because their coronary artery distribution more closely resembles that of human beings. Studies in dogs subject to oligemic shock through progressive bleeding have demonstrated that Peritrate (pentaerythritol tetranitrate) is vasoactive at the postarteriolar level, producing increased blood flow and better tissue perfusion. These animal experiments cannot be translated to human behavior

Indications: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. is indicated for the relief of angina pectoris (pain associated with coronary artery disease). It is not intended to abort the acute anginal episode but is widely regarded as useful in the prophylactic treatment of angina pectoris.

Contraindications: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg. is contraindicated in patients who have a history of sensitivity to the drug.

Warning: Data supporting the use of Peritrate (pentaerythritol tetranitrate) during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Should be used with caution in patients who have glaucoma.

Adverse reactions: Side effects reported to date have been predominantly related to headache (which may require discontinuation of medication) and gastrointestinal distress which are usually transient with continuation of medication.

Dosage: Peritrate SA Sustained Action (pentaerythritol tetranitrate) 80 mg., 1 tablet immediately on arising and 1 tablet 12 hours later (on an empty stomach).

Additional dosage forms
Peritrate (pentaerythritol tetranitrate)—10 mg. and 20 mg. tablets with or without phenobarbital.

Peritrate with Phenobarbital SA Sustained Action—80 mg. pentaerythritol tetranitrate and 45 mg. phenobarbital.

(**Warning:** Tablets containing phenobarbital may be habit forming.)

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other promotional materials, and he has served as staff liaison for a number of IMS committees.

Dr. John P. Cogley, of Council Bluffs, was this year's recipient of the Creighton University medical alumnus award, on October 8 in Omaha. Two years ago, the school began an annual custom of giving special recognition to a graduate of each of its seven divisions whose professional achievements have been outstanding.

Dr. Richard C. Wooters, of Des Moines, has been made an active member of the American Academy of General Practice.

An epidemic of doctor's-bag thefts occurred in the southern half of Iowa late in September and early in October. On September 21, bags belonging to **Drs. Gerhard Grundberg** and **O. L. Frank,** who both practice at Maquoketa, were found in a roadside ditch near there. Nothing other than narcotics had been taken. On September 24, five medical bags belonging to Fairfield doctors were found beside a fence that encloses a park there. An item in the IOWA CITY PRESS-CITIZEN for October 3 told of bags similarly recovered, with no more than the narcotics missing, by doctors in Iowa City, Coralville, West Branch and Lone Tree. On September 29, **Dr. Elmer A. Larsen,** of Centerville, reported that a bag had been stolen from his car as it stood outside St. Joseph Hospital there. On October 3, **Dr. John Rankin** lost one, containing a quantity of narcotics, from his car outside a Keokuk hospital. Finally—perhaps—three medical bags were stolen from **Dr. Keith Garber's** automobile, in Corydon, on October 6. They had been found at a roadside and turned over to the sheriff before Dr. Garber had occasion to use them. He said they contained only small amounts of Morphine and Demerol.

Dr. K. R. Brown, of Leon, exhibited a movie at the October 3 meeting of his town's Rotary Club. Entitled "That's Me," it tells the story of a young family man who stopped smoking, on the advice of his physician, before his health could be impaired.

On October 6, three Des Moines physicians took part, together with men from the public schools, the State Department of Health and Drake University, in a televised panel discussion of venereal-disease control. They are **Dr. Julius S. Conner,** director of the Des Moines-Polk County Health

Department, **Dr. Robert E. Allender,** an obstetrician and gynecologist, and **Dr. Edmund T. Burke,** a urologist. The station was KDPS-TV.

Dr. William A. Bockoven, of Ames, and **Dr. Thomas E. Piekenbrock,** of Dubuque, both psychiatrists, together with an attorney, a clergyman and a medical social worker, presented a workshop on comprehensive community mental health services at Upper Iowa College, in Fayette, on October 10, under the sponsorship of the Iowa Association for Mental Health, Des Moines.

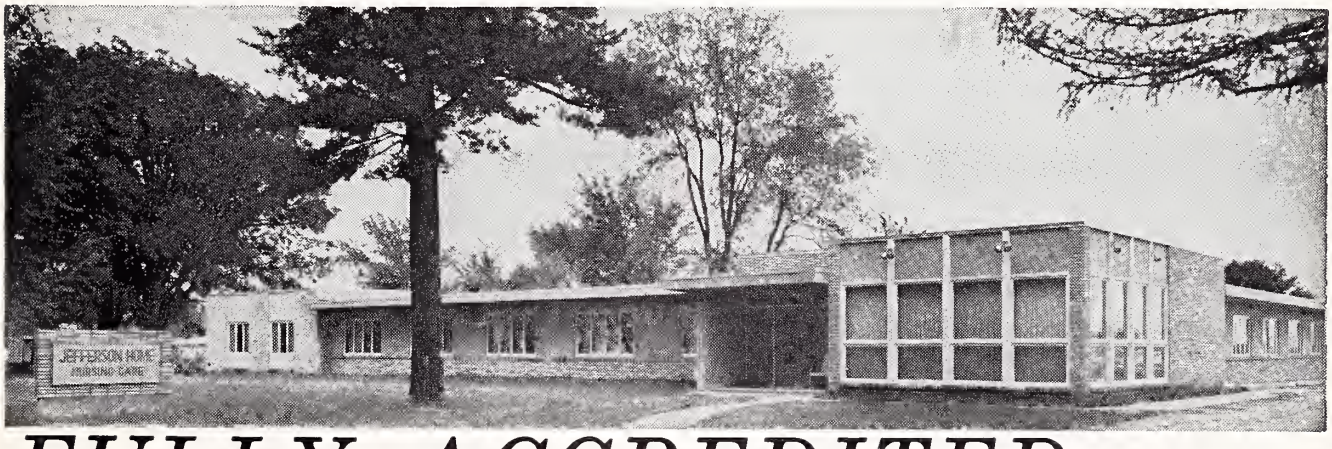
Dr. Carl E. Vorhes, of Sheldon, addressed the October 3 meeting of the Sheldon Woman's Club on the topic "Living With Medicare."

Dr. J. C. Timmerman opened a dermatologic practice in Iowa City on October 3. He is a 1960 graduate of the U. of I. College of Medicine. After a year of internship in Youngstown, Ohio, he engaged in general practice briefly at Mt. Pleasant, and then entered military service. On returning to civilian status in 1963, he began his three-year residency at his *alma mater,* and completed it only recently. He and Mrs. Timmerman have two daughters.

Dr. John Doran, of the McFarland Clinic, Ames, addressed junior-high-school girls and their mothers, at the high school auditorium in Jefferson, on October 4, under the sponsorship of the Greene County office of the Cooperative Extension Service in Agriculture and Home Economics, the headquarters of which are at Iowa State University, Ames. His topic was "Knowing Yourself as You Grow Up." Letters had been sent home with the youngsters who attend each of the Greene County schools, inviting the girls, *provided only that they could bring their mothers with them.*

Funds are being raised for a 35-bed hospital in Forest City. Solicitations are planned to extend over a 36-month period.

Voters at Le Mars, early in October, approved a $300,000 bond issue so that the town might take



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over and operate Sacred Heart Hospital, an institution that has been run by the Sisters of St. Francis for 46 years. The "Yes" votes constituted 97 per cent of the total cast.

Dr. Beryl Michaelson, president of the Humboldt County Medical Society, addressed about 60 of the 600 members of the Humboldt County Hospital Auxiliary, early in October. She told them of the plans for the Hospital, for as yet it is no more than a gleam in people's eyes.

The Mapleton Club has named **Dr. H. L. Ganzhorn** the Mapleton citizen of the year.

Dr. K. M. Lemon, of Oskaloosa, discussed hormones at a meeting of the Mahaska County Nurses Association late in October.

Dr. James Stiles and **Dr. Marian Barnes,** both of whom practice in Cedar Rapids, discussed methods for the early detection of gynecologic cancers at meetings of women's clubs there, during the first week in November. They exhibited two moving pictures: "Time and Two Women" and "Breast Self-Examination."

From 9:00 to 10:00 p.m. on November 3, **Dr. Edward J. Hertko,** coordinator for Iowa for the American Diabetes Association and a specialist in internal medicine, **Dr. Loren E. Peterson,** another internist, **Dr. Richard E. Paul,** a surgeon, **Dr. James H. Dickens,** a generalist, and **Dr. Everett A. Nitzke,** a pediatrician, discussed methods for the diagnosis and control of diabetes over KDPS-TV, the television station of the Des Moines Public Schools. All five men practice in Des Moines.

Dr. R. C. King, of Clinton, a member of the State Alcoholism Commission, was one of the discussion leaders at a one-day workshop on alcoholism held at St. Joseph Mercy Hospital, Sioux City, on November 16, under the sponsorship of the Siouxland Council on Alcoholism.

At a meeting of the Wapello County Medical Society, held in the Ottumwa Country Club on November 1, **Dr. Christian E. Radcliffe,** a professor of dermatology at the U. of I. College of Medicine, spoke on "Repository Triamcinolone in Various Dermatoses."

Dr. L. H. Prewitt, of Ottumwa, received a merit award from the American Academy of Ophthalmology and Otolaryngology at its annual meeting in Chicago late in October. It was given him in recognition of his participation in the Academy's exhibits and instructional programs.

Dr. William E. Bell, a professor of pediatric neurology at the U. of I. College of Medicine, was one of the participants in a conference on cerebral dysfunction in mental retardation, held at the Woodward State Hospital-School on November 4. The meeting was intended principally for psychologists and teachers.

At the annual meeting and scientific sessions of the Iowa Academy of Ophthalmology and Otolaryngology, held at the University Athletic Club, in Iowa City, on September 16 and 17, **Dr. William P. Davey,** of Sioux City, succeeded to the presidency, and the following officers were elected: **Dr. Edward E. Anderson,** Davenport, president-elect; **Dr. Byron M. Merkel,** Des Moines, vice-president; and **Dr. William F. Hoffman,** Iowa City, secretary-treasurer. The next annual meeting of the organization will be held at the same place on September 22 and 23, 1967.

Woodrow W. Morris, associate dean for student affairs in the U. of I. College of Medicine, has been elected vice-chairman of the Continuing Group on Student Affairs of the American Association of Medical Colleges. The group studies problems related to medical student affairs and assists in improving techniques for attracting, selecting, and guiding the professional development of medical students. Dr. Morris has been a member of the group since its inception in 1956. At that time he was named chairman of the Great Plains Region, one of five regions of the group. Regional chairmen serve as an executive arm of the group. Dr. Morris has also served as chairman of the group's committee on research which has made important contributions to medical education through the collection of data in areas where no single medical college has a sufficient volume of material to permit valid conclusions to be drawn.

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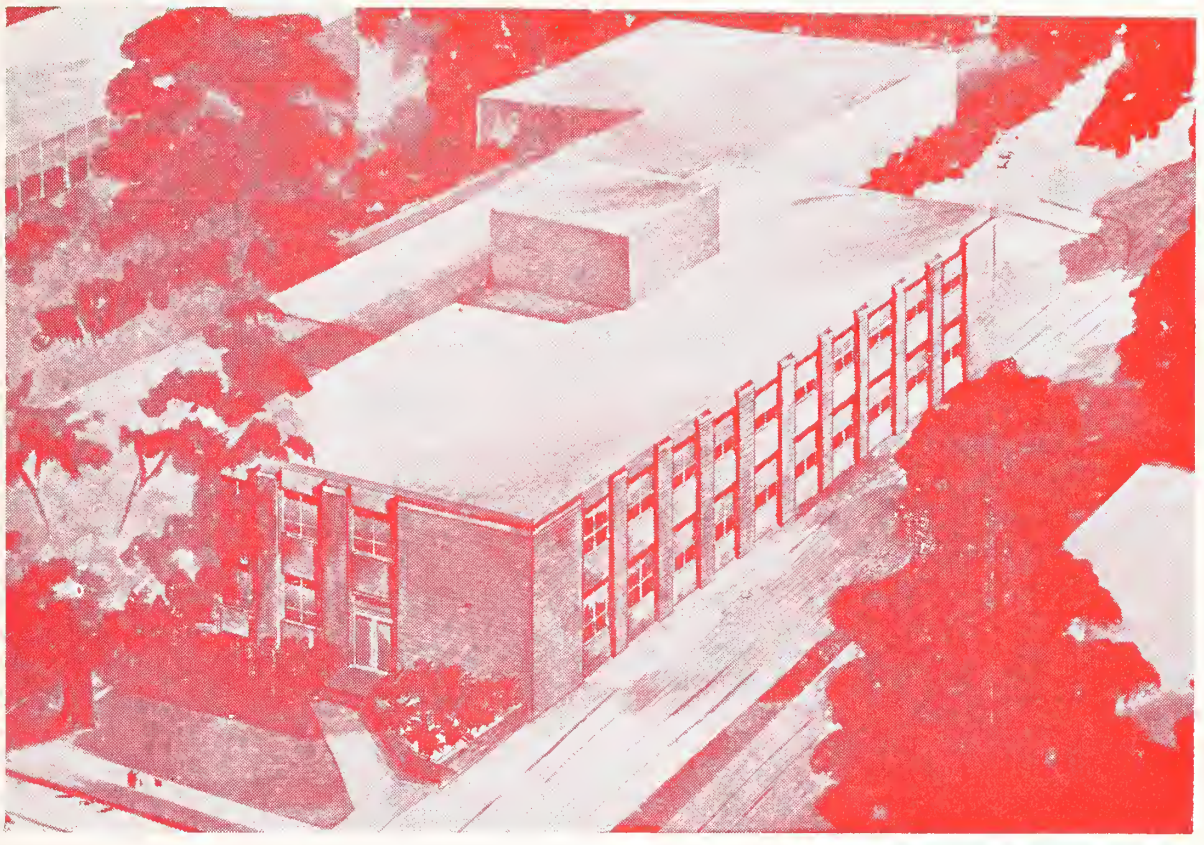

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Deaths

Dr. Marvin O. Larson, 61, who had practiced medicine in Hawarden since 1938, died at the community hospital there, on October 29, following a heart attack. He was a 1931 graduate of the U. of I. College of Medicine, he interned at Ancker Hospital, St. Paul, and practiced at Alton, Iowa, for six years before coming to Hawarden. After a high school football game Friday night, he was summoned to the hospital to attend one of his patients. While there, he himself became ill, and he died at about 3:00 Saturday morning.

Dr. Daniel Farrel Huston, 84, of Burlington, died at Mercy Hospital there, on October 28. He received his medical education at Creighton University, and served as an EENT specialist in Burlington for 47 years.

Dr. George E. Sanders, 89, who practiced medicine in Des Moines for 53 years, until his retirement in 1956, died on October 17 in Coral Gables, Florida. He took his bachelor's degree at the University of Iowa, and his M.D. degree from the Drake University Medical School, and interned at Iowa Methodist Hospital, Des Moines.

Dr. Jesse E. Bailey, 61, who served as chief anesthesiologist at the Veterans Administration Hospital in Des Moines from 1949 until his retirement early this year, died on August 28 in Raleigh, North Carolina, apparently of coronary occlusion. He was a graduate of Vanderbilt University and the Tennessee Medical College; he interned at City Hospital, Memphis; and served his residency at the University of Minnesota following Army service during and shortly after World War II. He practiced briefly in each of three other states before coming to Iowa.

Dr. Jim Aroscoe Carr, 89, who had practiced medicine for 56 years at Grand River, died at the Creston Community Hospital on September 25. He was a graduate of the Drake University College of Medicine.

Dr. Earl D. McClean, 82, a retired Des Moines physician, died at Memorial Hospital, South Bend, Indiana, on October 26, of cancer. The funeral services and burial took place in Des Moines. Dr. McClean was a graduate of the Hahnemann Medical College, Chicago. He practiced for eight years in Oskaloosa before moving to Des Moines.

Dr. Richard Earle Donahue, 37, a Centerville physician who was recalled to Navy service a year ago, was among those killed in the fire aboard the *U.S.S. Oriskany,* an aircraft carrier in the Gulf of Tonkin, near the coast of Viet Nam, on October 26. A native of Centerville, Dr. Donahue was a 1954 graduate of the U. of I. College of Medicine. He spent most of his short professional career on aircraft carriers—the first eight or nine years after receiving his medical degree, and the final year of his life. He served Centerville only from 1963 to 1965.

AMA Proposes Rural Emergency-Care Plan

On October 14, the American Medical Association's Council on Rural Health offered a five-point program for improving emergency medical care in rural areas. The program is the first step in a larger AMA project to insure excellence of emergency care nationwide. As outlined by the Council, the program stresses wider first-aid training for rural Americans and swifter handling of emergency victims.

The Rural Health Council's program, approved by the AMA Board of Trustees, urges that:

1. Rural communities coordinate their efforts with adjacent towns or urban centers in analyzing existing patterns of response to medical emergencies.

2. Rural and urban communities secure emergency medical transportation facilities and health personnel.

3. Rural and urban communities where possible, adopt the model ambulance ordinance to give the public a greater voice in the quality of ambulance care. (The ordinance proposes standards for ambulance equipment, personnel and operation, liability insurance requirements, maintenance of records, duties of regulatory agencies, and penalties to be imposed if the ordinance is disobeyed.)

4. Rural and urban communities provide a program of advanced Red Cross first-aid instruction for the non-medical people most frequently called in rural emergencies—especially police, sheriffs, and ambulance crews.

5. Rural and urban communities develop a continuing campaign directed toward first-aid instruction for rural families and particularly young people through the schools, youth organizations, and other educational channels.

Assisting in organizing and implementing the program are the American Red Cross, the Federal Extension Service, the Department of Health, Education and Welfare, the National Education Association, the National Grange and the American Farm Bureau Federation.

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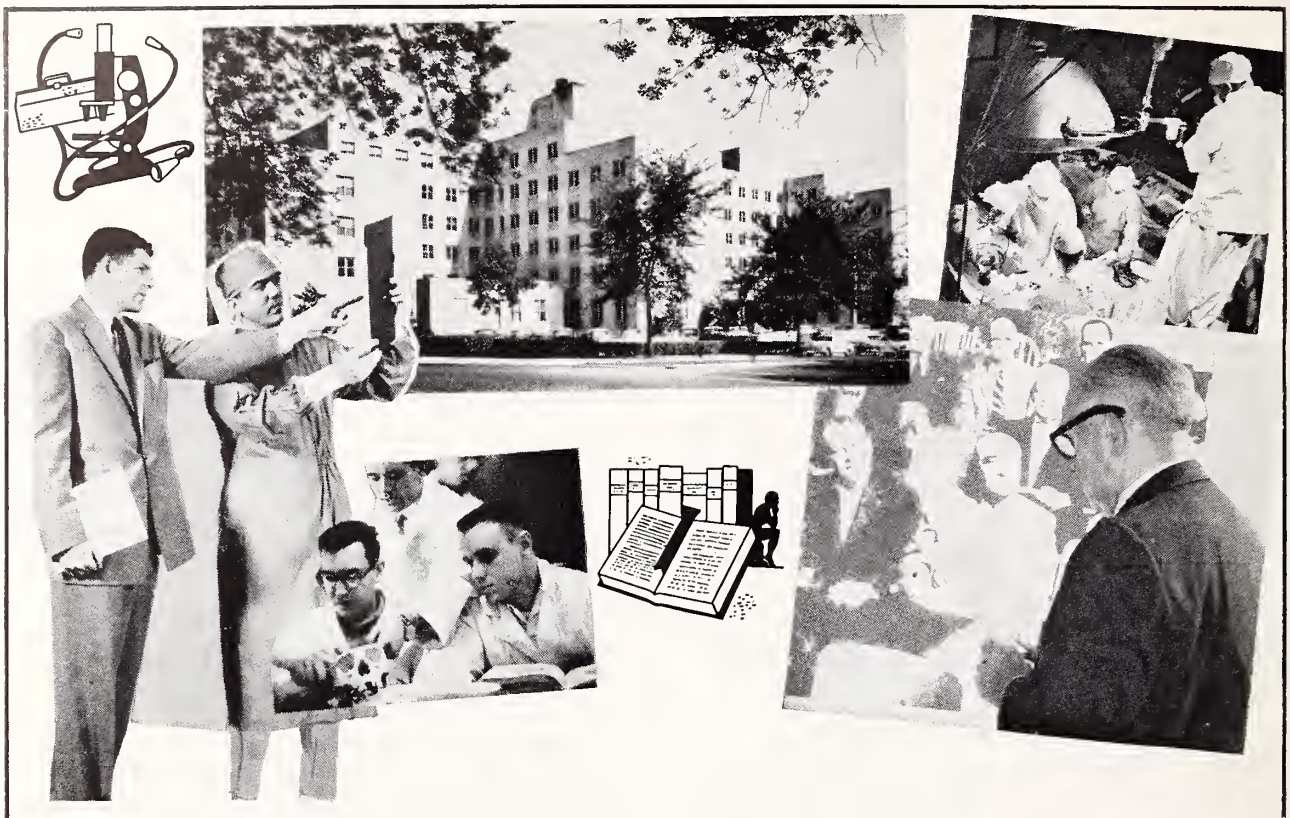

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